HOSPITAL ABSTRACTS

A MONTHLY SURVEY OF WORLD LITERATURE

PREPARED BY THE DEPARTMENT OF HEALTH

AND SOCIAL SECURITY

VOLUME 17, NO. 12, ABSTRACTS 1682-1831. DECEMBER 1977

LONDON: HER MAJESTY'S STATIONERY OFFICE

£1 net

Hospital Abstracts aims to cover the whole field of hospitals and their administration, with the exception of strictly medical and related professional matters. The abstracts purport to be fair summaries of the original papers; no responsibility can be accepted by the Department of Health and Social Security for the statements or opinions expressed in them.

Copies of publications and reprints of articles, for early notice in **Hospital Abstracts**, are invited. They should be addressed to: The Librarian, Department of Health and Social Security, Alexander Fleming House, Elephant and Castle, London, SE1 6BY, (01-407 5522, ext. 6954 or 7854) to whom also correspondence relating to the contents of the journal should be sent.

Hospital Abstracts is published monthly by Her Majesty's Stationery Office and is obtainable directly from the addresses shown on cover page iv, price £1 (£1.11 by post). Annual subscription £13.32 including postage. Subscriptions and orders by post should be addressed to Her Majesty's Stationery Office, P.O. Box 569, London, SE1 9NH.

PHOTOCOPYING SERVICE

Single copies of papers summarized in **Hospital Abstracts** can usually be supplied. This service is free to British hospital authorities but a charge of 12.5p a page is made to other subscribers. Requests must be made on the official form, copies of which (with details of the photocopying service) can be obtained from: The Librarian, Department of Health and Social Security, Alexander Fleming House, Elephant and Castle, London, SE1 6BY.

HOSPITAL ABSTRACTS

A MONTHLY SURVEY OF WORLD LITERATURE
PREPARED BY THE DEPARTMENT OF HEALTH
AND SOCIAL SECURITY

VOLUME 17, NO. 12, ABSTRACTS 1682-1831. DECEMBER 1977
LONDON: HER MAJESTY'S STATIONERY OFFICE

© *Crown copyright 1977*

First published 1977

ISBN 0 11 722622 X
ISSN 0018 5507

CONTENTS

	Page
Hospitals in Great Britain	621
Hospitals in other countries	621
Planning, design and construction	623
Determining size of hospital and bed needs	624
Hospital design	624
Design of individual general hospitals	626
Design of special departments	627
Design of special hospitals or units	627
Engineering services	628
Installations in general	628
Transport in general	628
Heating	628
Ventilation and air-conditioning	628
Maintenance of buildings and equipment	628
Equipment, fittings, furniture	629
Equipment generally	629
Medical equipment	629
Laboratory equipment	629
Staff generally	629
Staff complements	629
Staff management	629
Staff training	629
Special classes of staff	630
Administrative and clerical staff	630
Medical staff	630
Nursing staff	631
Organization and administration	633
Governing bodies, committees	635
Economics of hospital management	636
Running costs	636
Bed occupancy, economic use of beds	637
Electronic data processing	637
Libraries	639
Medical records	640
Legal aspects of hospital administration	641
Finance and accounting	641
Finance	641
Hospital accounting	642
Supplies and stores	642
Supplies	642
Purchasing	643
Quality control	644
Stores	644
Catering, dietetics, kitchens	645
Hospital catering	645
Dietetics in the hospital	646
Food service	646
Laundries and linen service	647
Hospital linen and textiles	647
Hygiene in the hospital	647
Hospital infections	647
Sources of infection	647
Prevention and control	648
Hygiene in the operating theatre	648
Sterilization	648
Air hygiene	649
Disposal of waste	649
Safety measures	651
Fires and fire prevention	651
The patient	652
Admission and reception	652
Welfare of the patient	652
Hospital social work	653
The general practitioner and his patients	654
Transport of patients	655
Hospital care	655
Discharge of patients	656
Home care, after-care	656
Special departments	656
Wards	656
Pharmacy	656
Laboratories	660
Blood transfusion department	661
Diagnostic X-ray department	662
Radioisotope department	662
Physiotherapy department	663
Intensive care units	663
Special hospitals and units	664
Out-patient	664
Casualty and accident	664
Day hospitals	665
Infectious diseases and isolation	665
Children	665
Geriatrics and long-stay	666
Cardiology	669
Surgery	669
Maternity	669
Psychiatry	670
Author index	v
Addresses of publications	vi

HOSPITAL ABSTRACTS

Vol. 17 December, 1977 No. 12

HOSPITALS IN GREAT BRITAIN

See also Abstract Nos. 1819-1821

1682. BENNETT, A. E. **Direction or support: the hospital's role in medical care.** *New Universities Quarterly*, Oxford, 1977, vol. 31, no. 2, pp. 207-219.

Health care in the West has evolved rather than been planned to meet predetermined needs. Within this process of evolution, how have the present day functions of hospitals in the National Health Service (NHS) arisen and are these functions best served by the hospital? Indeed, do they have a relevant purpose within the health care system? After considering such questions as these, it may be possible to offer suggestions for the future. This paper discusses the development of voluntary hospitals, the inception of the NHS, the publication of the hospital plan in 1962, the relationship between the GP and the consultant, and the hospital and medical education. The needs of the community for care have changed since the inception of the hospital and the presence of hospitals of ever-increasing size has unbalanced the system for providing that care. It is essential to distinguish between the hospital as a building and as a functional unit. The centrifugal model of the hospital requires that it support rather than direct—support the primary care doctor, continuing care services and those members of the community who become patients. The district general hospital of the future must function as a diagnostic centre and gear treatment facilities to ambulatory care by increased use of day and short-stay wards. In-patient beds will still be required for the 'caring' or original hospice function, but a distinction must be made between the 'caring' and 'curing' functions and their different requirements.

HOSPITALS IN OTHER COUNTRIES

See also Abstract Nos. 1697, 1698

1683. CASTELLANI, F. and VALLI, G. Gli ospedali nel servizio sanitario nazionale. **[The hospitals in the national health service.]** *Ospedali d'Italia*, Rome, 1977, April, vol. 14, no. 4, pp. 12-25.

The authors discuss the decentralisation of power which is implied in the draft law on the Italian National Health Service and, in particular, the relations between the proposed Local Health Councils and the hospitals. They examine the possibilities for local participation in these Councils, the role of health personnel on the regional and infra-regional levels, and the extent of autonomy below regional level. They propose a management structure which will relate the Local Health Council to the hospital.

1684. BACHNER, E. and KUHLANG, H. Waidhofen an der Ibbs-ein Grundversorgungskrankenhaus. **[Waidhofen an der Ibbs—a hospital providing basic care.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1977, May, vol. 18, no. 5, pp. 288, 290-294.

This description of the hospital at Waidhofen, Lower Austria, aims to show that the

smallest hospitals in Austria (known as 'basic care' hospitals and having only medical, surgical and obstetrics and gynaecology departments) are nonetheless fully equipped in accordance with the most modern standards. The medical department has a modern chemical laboratory, an intensive care unit, and out-patient facilities. The surgical department is equipped to deal with accidents and emergency operations. The newly built department for obstetrics and gynaecology has its own operating theatre and an up-to-date maternity ward. Patients' rooms are two-, three- or six-bedded and the larger wards in the older blocks have been divided up into five-bedded bays. The paper is illustrated with two floor plans.

1685. Krankenhausneubau in Baden. **[New hospital building in Baden.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1977, May, vol. 18, no. 5, pp. 277-284, 287-288.

The hospital at Baden, Lower Austria, is to be rebuilt in three stages. The first stage, to be completed by 1980, is described here. This includes part of the subground floor, the part of the main block containing the entrance hall and lifts, and the first of two ward blocks. The ground floor houses administration and treatment areas and above this rises the circular tower with its six ward floors. Patients' rooms (one single, four three-bedded and three six-bedded on a typical floor) are on the perimeter with ancillary rooms in the centre. The second stage will complete the subground floor and add a second ward block, while the third stage will provide a treatment block. The paper is illustrated with outline floor plans.

1686. ENGELBRECHT, G. Schwerpunktkrankenhaus Oberwart. **[The central general hospital at Oberwart.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1977, June, vol. 18, no. 6, pp. 343-344, 347.

The new six-storey building under construction for Oberwart Hospital (province of Burgenland) will bring the bed complement up to 665. The new building will have 300 beds (surgery; accident surgery; obstetrics and gynaecology; ear, nose and throat; orthopaedics; urology; eye diseases; and intensive care) as well as treatment departments; administration; school of nursing; nurses' home; etc. The old building (185 beds) will house the medical; paediatric; dermatology; and venereal diseases departments. The Hirschenstein special hospital and sanatorium (some 30 km. from the main hospital) has 90 beds for mental and nervous diseases and 90 for lung diseases.

1687. GRIMSGAARD, Ø. H. and SOMMERFELDT-COLBERG, A. Haugesund Sjukehus. **[Haugesund Hospital.]** *Sykehuset*, Oslo, 1977, vol. 40, no. 3, pp. 123-139.

A 173-bed extension (architects: the authors) is to be built as Stage I of the modernization of the 108-bed hospital in Haugesund. Internal transport is organized on the double corridor system, with separate lifts and stairways serving each system. All out-patient facilities are concentrated on the First level: X-ray; gynaecology; neurology; surgery; casualty and admissions; and otorhinolaryngology. The basement houses: central supply; cleaning; bed-making; sterilization; stores and laundry services; the mortuary; archives; the physiotherapy department; and the changing rooms. The second level comprises: a three-section department of surgery, with post-operative ward, intensive care ward, coronary ward and a 33-place bed-ward. Obstetrics and gynaecology occupy

the third level, with the library and the paediatrics department. The fourth and fifth levels each contain a 44-bed ward; and a kitchen and cafeteria occupy the sixth level. A helicopter landing platform with facilities for rescue from the North sea oil rigs is sited on the roof. A separate 1,150 m^2 technical (engineers) block brings the total area up to 27,300 m^2. In Stages II and III of construction, the old block will be re-built and a new 6,000 m^2 west block will be added.

1688. PRÉFECTURE DE LA RÉGION D'ÎLE DE FRANCE. OBSERVATOIRE RÉGIONAL DE SANTÉ. Fréquentation hospitalière et sectorisation sanitaire. **[Hospital use and public health planning.]** *Revue Hospitalière de France*, Paris, 1977, June/July, vol. 41, no. 302, pp. 543, 545-561.

A provisional Health Map dividing French regions into sectors which would serve as a basis for the assessment of the number of hospitals required was published in 1973. The object of the present study was to determine which hospitals in the Île de France region were and would be used by the inhabitants of each commune in the region and whether these establishments were situated in the same sector as the population which they served. Data were collected relating to present admissions to each hospital and the commune in which each patient resided. A computer analysis was then carried out commune by commune and hospital by hospital, and maps drawn of the 'zone of attraction' of each hospital. Forecast maps were also prepared for as far ahead as 1985. The methods employed and results obtained are fully described and illustrated with four maps and 18 figures and graphs. It is clear that, in planning future policy, the aim must be to achieve a better geographic distribution of hospitals in relation to population.

1689. FREYMANN, H. Prüfung der Krankenhäuser durch Externe unter besonderer Berücksichtigung vons 16 abs. 3 BPf1V. **[Examination of hospitals by outside bodies with special reference to para. 16 section 3 BPf1V.]** *Krankenhaus Umschau*, Kulmbach, 1977, June, vol. 46, no. 6, pp. 480-484.

Recent hospital legislation in West Germany lays down certain requirements as to hospital accounting systems. These are intended to give more costing information and to make possible an improved assessment of hospital performance. The basic principles involved are outlined and details are given of the annual statements required.

PLANNING, DESIGN AND CONSTRUCTION

See also Abstract Nos. 1688, 1715, 1717

1690. KNOWLAND, R. **Control of project economy. Part 1.** *Hospital Development*, London, 1977, July/Aug., vol. 5, no. 4, pp. 10-11.

The aim of this paper is to assess and set out in the form of a blueprint the most important factors and guidelines which should be taken into account in producing a cost control 'procedure', for incorporation into a project manual concerned with methods required for the running of a major hospital project. Definitions of relevant terms are presented first. Control measures are discussed in two parts: pre-contract period and post contract period. The first step is to appoint a project manager, who will then establish project machinery and draft the project manual. Items for inclusion in the manual are suggested and some of them are discussed.

1691. WEATHERILL, J. **A strategy for reutilizing existing buildings.** *Dimensions in Health Service*, Toronto, 1977, July, vol. 54, no. 7, pp. 25-28.

There is a need to develop approaches for evaluating the potential usefulness of existing facilities so that they can be adequately responsive to the demands made on them. A strategy for re-use must be flexible, broad in scope, and receptive and sensitive to immediate needs. The approach described in this paper has been designed to minimize problems associated with the modification of existing facilities, by taking an empirical view of the many factors which contribute to problems and high costs. There are four basic steps: analysis, evaluation, generation and selection. Analysis determines what is available in terms of existing facility resources and what is required in terms of functions. Evaluation involves policy decisions and planning statements, space and occupancy standards, and cost parameters. Steps three and four involve the generation and evaluation of alternative development proposals.

DETERMINING SIZE OF HOSPITAL AND BED NEEDS

1692. GLÜNDER, H. Zur problematik der krankenhausbedarfsplanung. **[On the problems of planning to meet the need for hospitals.]** *Krankenhaus Umschau*, Kulmbach, 1977, May, vol. 46, no. 5, pp. 318-322.

In accordance with the requirements of recent West German hospital legislation each *Land* is in process of producing a plan for its future hospital needs. This paper sets out some of the problems thrown up by such an exercise, with special reference to the conditions in Lower Saxony. Hospitals are at three levels: 'basic care', 200-250 beds (minimum 100); 'normal care', 400-600 beds (minimum 200); and 'central care', 600 plus beds (minimum 400). The smaller hospitals are not to be regarded as inferior: for the specialties they cover they are as fully equipped and efficient as the larger. There are three basic factors for determining requirements: admission rate; length of stay; occupancy rate. The first two should be determined separately for each specialty if they are to be useful. There are also a number of other factors (e.g. population movement, birth rate, age structure, economic conditions, traffic structure) which affect local conditions and make the use of global averages less efficient. There must be flexibility among the three types of hospital. The *Land* authorities should not assume the role of dictators in hospital affairs; rather should they encourage and support the local hospital authorities.

HOSPITAL DESIGN

See also Abstract Nos. 1685, 1696, 1697, 1822

1693. BILLING, A. **Concept of the nucleus hospital. Part 2—inpatient accommodation.** *Nursing Mirror*, Sutton, 1977, June 30, vol. 144, no. 26, pp. 17-19.

The nursing sections in the nucleus hospital have been designed to meet the requirements of patients, nurses, doctors and other hospital staff, to provide for flexible use, to exploit the advantages of standardization, and to achieve economies without a lowering of nursing and medical standards. A standard profile or template has been used and modifications are made within it to meet the needs of the differing specialties

when necessary. This paper gives details of the following aspects of the in-patient units: the design brief, the design solution, bed area, single rooms, sanitary facilities, storage space, and safety. Whole departments or groups of smaller departments are contained within the basic profile. The staff base is seen immediately on entering the bed area of each individual 28-bed nursing section. The curtained zone to each bed will be 2.4 m to 2.5 m × 2.9 m (approximately 7 feet 10 inches to 8 feet 2 inches × 9 feet 6 inches). The two single rooms in each section are provided with an integral water closet.

1694. BERGH, G. Efter sju år i F län: Nya lagar, krav och synsätt präglar omgjord sjukhusplan. **[Seven years later in a developing region: new regulations, needs and aims have made their mark on the Jönköping County (Central) Hospital plan.]** *Landstingens Tidskrift*, Stockholm, 1977, May, vol. 64, no. 6, pp. 36-40.

The general plan for Jönköping County Central Hospital published in 1970 has been modified and re-issued under the title of "Gp 77", as a result of changes in the Health Act, working environment legislation, worker participation laws, and the current economic situation. The major legislative changes comprise the establishment of an environment favourable to children and to handicapped patients, both requiring extensive revision of the original plans. The Staff Participation Acts led to the involvement of a series of staff representative advisory committees in the comprehensive revision work. Working parties then prepared a series of preliminary Departmental Function Programmes for a typical ward, reception department and office. These programmes have been distributed internally for criticism and comment, and are now being revised accordingly. The floor areas required for the future departments were then worked out in detail, and it was decided to commence construction of Stage F of the central hospital, comprising central stores, kitchens and telephone exchange, in May 1978. Stage F is budgetted to cost s.kr. 28 million (November 1976 prices). Stage 1, comprising general surgery, orthopaedics, urology, ear and eye departments, children's surgery, cardiac intensive ward and medical service departments, will occupy some 370,000 m^3. Construction is due to start in the autumn of 1980 and to last four or five years, at a total cost of s.kr. 341 million. The article is illustrated with a ground plan of the projected hospital and two diagrams representing design and consultative committees.

1695. MANDAL, A. C. and GUNDERSEN, G. Hospitalsergonomi. **[Ergonomics in the hospital.]** *Tidskrift for danske Sygehuse*, Glostrup, 1977, May, vol. 53, no. 5, pp. 74-90.

The traditional hospital bed, divided into two sections with a lifting head end, contributes to the mass production of bedsores and is difficult for staff to handle. A water bed avoids bedsores but is not ideal for respiration; there are also problems over the use of a bedpan and the bed is difficult to get out of unaided. The ideal hospital bed is divided into three sections, the patient's hip-joint being flexed 45° and the knee-joint 70° to 80°. The frame can be made much more simply than it is today. Chairs for hospitals, schools etc. should be designed so that the seat tips forward 15°, the centre of the seat being 43 cms above floor level. The working surface (table) should, where possible, be inclined to an angle of 10° towards the sitter. Surgical operating tables should also be divided into three sections to allow the patient to lie and breathe naturally, and should be on a hydraulic lift to allow the patient to get on and off easily and

the operating staff to sit comfortably. Foam rubber cushions should be provided for the comfort of the patients down for a longer X-ray examination. A rocking chair is better for older people than an armchair: it is easy to get in and out of, and it exercises the leg muscles. Wheelchairs need to be redesigned to distribute the weight of the patient more evenly and counteract the tendency to slide down. Uncomplicated births are best and easiest with the mother sitting in an obstetric stool: these went out a hundred years ago and should be reintroduced. Cleaning materials and vacuum cleaners should be designed so that the cleaner can work upright instead of bent forward. Back trouble is an avoidable consequence of bad design: prevention is cheaper and better than cure. The article is illustrated with 34 photographs. There are four references, three of them English.

DESIGN OF INDIVIDUAL GENERAL HOSPITALS

See also Abstract Nos. 1684, 1694

1696. GUNDERSEN, G. Amtssygehuset Roskilde: dispositionsplan og ny køkken- og servicebygning. **[Roskilde County Hospital: its ground-plan and new kitchen and services building.]** *Tidskrift for danske Sygehuse*, Glostrup, 1977, May, vol. 53, no. 5, pp. 65-73.

Roskilde County Hospital (architects: Krohn & Hartvig Rasmussen) has 444 beds supplied by a single-storey kitchen and service block connected to the treatment block's stairway and lifts centre by an underground tunnel system. The service block has a net area of 9,890 m^2; the 1,880 m^2 kitchen being designed to serve some 3,000 patient and staff meals a day (working from 6 a.m. to 2 p.m.). There is a 120 place, partial self-service staff canteen with a separate coffee and smoking room. There are also a meeting hall and a larger lecture hall. The western quarter of the building comprises the hospital staff cloakroom, with 26, 44-locker changing rooms, with associated showers and toilets. The building is constructed of brick-faced concrete on a 720$\times$720 cm. module. Construction commenced in November 1973 and the building was opened in June 1975 at an overall cost of d. kr. 33.2 million (£3 million). The article is illustrated with 4 exterior and 16 internal photographs, 4 ground plans and 2 elevations (E.-W. & N.-S.).

1697. HALBACH and OHLOW. Der Neubau des US-Army-Hospital in Berlin. **[The new building of the US Army Hospital in Berlin.]** *Krankenhaus Umschau*, Kulmbach, 1977, June, vol. 46, no. 6, pp. 508-511.

The new 200-bed United States Army Hospital in Berlin was completed in December 1976. The main building consists of a one-storey podium above which rise the three ward floors; an operating suite linked at first floor level; and a two-storey children's and isolation wing. Wards are on a single corridor plan with patients' rooms (mainly two-bedded) facing east and west. Each patients' room has its own toilet and wash basin. There is a day room for each pair of nursing groups. The ward block and the operating suite are fully air-conditioned. The paper is illustrated with five photographs.

1698. BARFOD, J. Lilongwe General Hospital—et dansk U-lands projekt. **[Lilongwe General Hospital, Malawi—a Danish project in a developing country.]** *Tidsskrift for danske Sygehuse*, København, 1977, April, vol. 53, no. 4, pp. 47-55.

In 1969 the Danish firm of Birch & Krogboe approached the Ministry of Health

about the construction of a hospital in the new Malawi capital of Lilongwe. It was decided to build a 450-bed hospital in two stages, a condition of the first, 250-bed stage being that it must not cost more than M£ 800,000 exclusive of equipment. On the basis of four, half-week visits to the site and an analysis of: (i) construction costs; (ii) staff costs; (iii) minimum running costs; (iv) facilities for subsequent extension; and (v) climatic factors, the Architect's Department of the engineering firm Kampsax produced a project which was approved by Dr. Banda in 1972 but then shelved for a year for lack of funds. The hospital is designed as a four-storey ward block with a single-storey therapeutic and out-patient building for the expected 1,000 out-patients a day. The hospital was opened in 1976. It is constructed of simple, robust materials; roofs overhang by over a metre, for shade, and the technical equipment is kept to a minimum except in the surgical and X-ray departments. A 15-bed recovery department has been added, and the final cost of construction was M£ 1,175,000 (2.35 million Kwacha). One remaining problem is the recruitment of qualified senior staff. Besides a map of Malawi and three photographs of the old hospital, the article is illustrated with plans of the new hospital, the ward block and the therapy block, plus two exterior and five interior views.

DESIGN OF SPECIAL DEPARTMENTS

1699. **Continuing education complex equipped to handle current, future technology of medical education.** *Hospitals*, Chicago, 1977, June 16, vol. 51, no. 12, pp. 34, 37.

The new North Shore University Hospital, Manhasset, N.Y., has a 20,000 square-foot continuing education complex designed as a dynamic educational centre for medical, nursing and other professional and paraprofessional staff. It includes a library, auditorium and five satellite conference rooms. The library facilities include 40 study carrels equipped with electric wiring to handle any electronic device, an audiovisual equipment room with its own carrels, and an enclosed conference room housing a collection of rare books. The auditorium has 250 fixed seats; it can be extended to 500 seats by opening electronically controlled folding doors round the satellite conference rooms. Sophisticated electronic capabilities have also been built into the conference room. The decor of the library is subdued, but that of the auditorium features bright and rich colours.

DESIGN OF SPECIAL HOSPITALS OR UNITS

See also Abstract Nos. 1822, 1823

1700. KONCELIK, J. A. **Designing the open nursing home** (Community Development Series 27) Stroudsburg, Pa., Dowden, Hutchinson & Ross, 1976, xiii, 175pp. £13.50

Nursing home interiors are too often oppressive and sterile, and dominated by their functions as health care facilities. This book provides useful source material and recommendations for design professionals and administrators to create open residential living space for the patient-resident. Aspects covered include; general background on the nursing home population; planning; design; and further proposals for research and development. Designs of utensils, tools, furnishings, and architectural details are included.

ENGINEERING SERVICES

INSTALLATIONS IN GENERAL

See Abstract Nos. 1695, 1702, 1719

TRANSPORT IN GENERAL

See Abstract No. 1772

HEATING

1701. DODSON, J. R. **Selecting water heating systems for variable hospital needs.** *Hospitals*, Chicago, 1977, May 16, vol. 51, no. 10, pp. 108, 110, 113-114.

Hospital hot water systems must meet a variety of specialized requirements to satisfy the needs inherent in the daily operation of the hospital (catering, laundry, etc.) and of 'process' requirements (presterilization, physiotherapy, etc.). Critical factors in selecting a system are safety, demand requirements, temperature needs, total installation and operating costs, and performance. Each of these factors is discussed in the light of the need to reduce costs, minimize space and energy requirements, and ensure safety and reliability.

VENTILATION AND AIR-CONDITIONING

See Abstract Nos. 1721, 1757

MAINTENANCE OF BUILDINGS AND EQUIPMENT

1702. DWYER, M. J. **Preventive maintenance—nemesis or salvation?** *Southern Hospitals*, Greenville, 1977, May/June, vol. 45, no. 3, pp. 7-10.

Whatever the size of a hospital, there are four primary steps in the development and implementation of a preventive maintenance programme: (i) determine what equipment will fall within the programme; (ii) determine what tasks are necessary to perform the required preventive maintenance and the frequency of each task; (iii) determine the work-hours required to implement the programme; and (iv) build a workable schedule. It is beneficial for all technicians to be involved to some extent in the programme. Work orders tell the technician what to check, its location and how often it is to be inspected. They are accompanied by a card for each item detailing the tasks to be performed. Adequate records of inspection results are essential. Follow-up consists of two steps: (i) return of completed work orders and inspection record cards; and (ii) spot checks by the appropriate foreman or maintenance supervisor. Brief details are given of the computerization of the preventive maintenance system at the University of Arkansas for Medical Sciences.

EQUIPMENT, FITTINGS, FURNITURE

EQUIPMENT GENERALLY

See Abstract Nos. 1737, 1742

MEDICAL EQUIPMENT

See Abstract No. 1744

LABORATORY EQUIPMENT

See Abstract Nos. 1791

STAFF GENERALLY

STAFF COMPLEMENTS

See Abstract No. 1747

STAFF MANAGEMENT

See also Abstract Nos. 1707-1709, 1767

1703. PHILLIPS, M. **Performance appraisal—a participative approach.** *Hospital Administration in Canada*, Don Mills, 1977, June, vol. 19, no. 6, pp. 68, 70.

At the Clarke Institute of Psychiatry, Toronto, performance appraisal of the nursing administrative staff had evolved from one of superior-subordinate, to self-evaluation, and finally a combination of self-evaluation superior-subordinate evaluation and objective setting. While this had worked satisfactorily for a few years, it was felt that a vital part was missing—the active participation of the nurses. With some reluctance, the head nurses as a group agreed to the inclusion of two representatives of the staff in the appraisal procedure. Guidelines were prepared and approved by the head nurses. Areas in which comments were requested were: strengths, weaknesses, habits of work, quality and quantity of work performed, interpersonal skills, and initiative. The procedure followed is outlined and the reactions of the participants are discussed. Prepared written performance appraisals were returned to the head nurses, who were expected to develop 10 objectives for the year from them.

STAFF TRAINING

See also Abstract Nos. 1699, 1710, 1713, 1749, 1774, 1793, 1807

1704. LINDSTROM, R. B. **The challenge for adult educators hospital-wide education.** *Dimensions in Health Service*, Toronto, 1977, July, vol. 54, no. 7, pp. 33-35.

Few hospitals, except very large ones, have hospital-wide educational facilities and manpower, and the educational needs of health care staff, other than nurses, are not adequately met. The need for specialists in continuing education for health professionals and for an autonomous department of hospital education is stressed. The department should also be concerned with patient education. Budgeting and funding for this department would follow established criteria as in other hospital departments, based on operating costs and capital equipment. The implications of shared services are discussed. Five possible models of hospital-wide education and training are: as a major department; administered by a committee; as a division of the personnel department; shared by several hospitals (consortium); and as an expansion of the nursing service. The consortium model lends itself particularly well to rural areas.

SPECIAL CLASSES OF STAFF

ADMINISTRATIVE AND CLERICAL STAFF

See Abstract No. 1767

MEDICAL STAFF

See also Abstract No. 1770

1705. AMERICAN HOSPITAL ASSOCIATION. **The Hospital Medical Staff, selected readings 1972-76.** Chicago, AHA, 1977, 205pp. $9.50

A cross-section is presented of the issues that have been raised in *The Hospital Medical Staff* from 1972 to 1976. The articles cover a wide range of subjects, from medical staff organization to accreditation and include discussions of the many medico-legal problems confronting medical staff in the United States as well as commentaries upon such problems as medical discipline and medical ethics. Areas covered include: physician-hospital relations; medical staff organization; medico-legal issues; management and governance; accreditation; medical discipline; and Professional Standards Review Organizations.

1706. CHITTENDEN, T. S. **Role of physician in malpractice needs more careful exploration.** *Hospitals*, Chicago, 1977, May 16, vol. 51, no. 10, pp. 53-56.

The rapid increase in medical malpractice suits in the United States has led to many efforts to develop risk management programmes. Most of these appear to relate to the physical environment of the hospital and to equipment safety, although some programmes are beginning to develop performance standards and educational programmes for nurses and technicians. However, injuries that result from the activities and conduct of physicians are not dealt with effectively. Expanding doctrines of institutional liability, coupled with increasing insurance costs and general financial constraints, will

create enormous pressure on the hospital to assume an effective leadership role with respect to the prevention of medically related injuries. Principles that may be useful in developing model programmes include: (i) they must have the whole-hearted support of the governing board and be managed by a person who has the confidence of the medical staff; (ii) they should relate very closely to the hospital's general quality assurance efforts; (iii) medical staff activities relevant to the prevention of medically caused injuries must be co-ordinated; (iv) effective steps to minimize losses from incidents that have occurred must receive as much attention as efforts to prevent compensable incidents; (v) programmes should involve persons who are responsible for the insurance function; and (vi) State and local hospital associations have an important role to play in the development and implementation of risk management programmes.

NURSING STAFF

See also Abstract Nos. 1725, 1755, 1796, 1807, 1823, 1824, 1829, 1831

1707. GILBERTSON, D. W., BUTTERFIELD, S. and GILL, I. **The ward sister: a suitable case for treatment.** *International Nursing Review*, Geneva, 1977, July/Aug., vol. 24, no. 4, pp. 108-113.

The merits and demerits of the New Zealand government's proposals for changes in that country's health services are being argued, but there is a fundamental lack of appreciation of the problems associated with the implementation of changes. The ward sister's integral placement and her key role in implementation has fostered the following review of her position in the New Zealand health service. The role of the nursing sister seems to vary in different wards and in different hospitals, and there is no current research which explains this phenomenon. This research gap inhibits the effective execution of the core duties of the ward sister who is in a position where mediation and liaison are vital to the efficient delivery of health care services. As a result of the lack of understanding of the role ambiguities and their causes, there has emerged a mythical image of the ward sister's function. Education, and the perceptions and interactions of other members of the health care team, tend to fit into the stereotype which has emerged. There is an urgent need to determine the role senders and the ambiguities resulting from conflicting roles sent, in order to isolate the actual as opposed to the mythical functions of the ward sister. Education for the future must be related to empirically determined needs rather than determined by the constant forward projection of existing stereotyping surrounding the ward sister.

1708. LEHMAN, M. W. and FRIESEN, Q. J. **Centralized control system cuts costs, boosts morale.** *Hospitals*, Chicago, 1977, May 16, vol. 51, no. 10, pp. 75-76, 78, 80.

One of the programmes developed by a full-time, in-house management engineering project at the 475-bed Methodist Hospital, St. Louis Park, Maine, was a centralized nurse staffing control system. A nursing service staffing department is headed by a staffing co-ordinator, who has a business rather than a nursing background. In addition to overall supervision, the staffing co-ordinator integrates the staffing programme with recruitment, personnel department, and admitting department functions. The co-ordinator is assisted by an assistant staffing co-ordinator and a staffing secretary. The staffing programme is carried out in three distinct phases: long-range planning, daily

staffing planning, and reporting/evaluation. The procedures followed in each phase are described. The scheme has resulted in better co-ordination, less fragmentation, consistent policy implementation, improved staff morale, improved quality of patient-care, and saving in staff salaries.

1709. CLAUS, K. E. and BAILEY, J. T. **Power and influence in health care: a new approach to leadership.** St. Louis, Mosby, 1977, xii, 191pp, £5.30

The critical need for effective nursing leadership in the United States is discussed. Two interrelated themes are presented: the leader has the capacity to use power wisely; and the leader is considered as a planner and initiator, responsible and accountable for the results. The book is in two sections: (i) a framework for power and influence; and (ii) methods of developing power and influence. A power/authority influence model is outlined so that nurses can develop their skills and become more effective leaders.

1710. COVENTRY, M. **Experimental training course for graduates.** *Nursing Times*, London, 1977, June 23, vol. 73, no. 25, pp. 965-967.

Glasgow Northern District College of Nursing and Midwifery has held a two-year course for university graduates since January 1973. Essentially, it is a condensation of the three-year course, although there are some differences in organization: (i) apart from the initial spell in school, and with one exception, the theoretical programme is given in study days once a week; (ii) the four-week community experience undertaken by all student nurses is given in four separate weeks; (iii) halfway through the course a three-week period is spent in nursing patients with communicable diseases to emphasize the need for preventive medicine and to provide experience in barrier nursing; (iv) a six-week training period is given in geriatric nursing; and (v) the graduate undertakes training in an area of her choice before her state finals at two years and is registered when the results are known. During the last few months of their training graduate students are asked to complete a questionnaire on their training and the results have been useful in assessing the course. The plan of the course is given, together with statistics of the first five intakes and the questionnaire with its results.

1711. **A symposium on moral dilemmas in nursing.** *Nursing Mirror*, Sutton, 1977, July 21, vol. 145, no. 3, pp. 13-26.

The symposium is made up of six articles based on papers read at the Royal College of Nursing Association of Nursing Students Conference held in March 1977. An introduction on medical ethics points out the areas where moral dilemmas arise: (i) the care of terminally ill patients; (ii) the problem of whether or not to resuscitate; (iii) the problem of telling the truth to patients and their relatives; (iv) the questions of abortion; sterilization and contraception; and (v) organ transplantation. The second article discusses the position of the student nurse when faced with a moral dilemma and the third deals with the ethics of nursing research with regard to: (i) obtaining the research subject's consent; (ii) setting up an ethical committee to approve a research project, and (iii) the relationship between a researcher and her sponsor or employer. Areas in psychiatric nursing which lead to moral problems include: (i) the protection of liberty and personal rights of patients in psychiatric hospitals: (ii) electro-convulsive therapy; and (iii) integrated wards. In the article on dilemmas in hospital nursing practice, the problem of prolongation of life and treatment are discussed. A nurse has

a right to refuse to be involved with treatment of which she may disapprove—such as abortion. As the nursing profession now regards itself as an independent entity it must be prepared to accept full responsibility for its actions. The final article deals with the legal aspects of: (i) consent to treatment; (ii) negligence; (iii) confidentiality; and (iv) police enquiries.

1712. CHALMERS, H. **Return to basics. 2. The care of the patient in bed.** *Nursing Mirror*, Sutton, 1977, July 14, vol. 145, no. 2, supplement, pp. i-iv.

Much of a nurse's work centres on caring for patients who are confined to bed and, therefore, the care of the bedridden deserves special attention and thought. The aspects of care discussed in this paper are: beds and bedmaking; additions to beds; position and movement; hygiene; nutrition; elimination; preparation for discharge; normality; and complications. Also included is a table showing some common complications of prolonged bed rest, their prevention, recognition, and treatment and care.

1713. JONES, I. H. **Orientation of student psychiatric nurses.** *Nursing Mirror*, Sutton, 1977, July 14, vol. 145, no. 2, pp. 30-32.

At St. Bernard's Hospital, Southall, it has been found useful for student psychiatric nurses to spend a day working on a ward during the six-week introductory block. But students often felt lost in their new role, unsupervised and unsupported. To overcome this problem, a letter introducing the student and the sort of tasks they should be assigned is sent to the ward sister in advance. The content and use of the letter are described. During the six weeks, visits and visitors are interspersed with theoretical instruction, rather than cramming orientation in a short continuous period. Details of all orientation activities are given.

ORGANIZATION AND ADMINISTRATION

See also Abstract Nos. 1703, 1799, 1800, 1825, 1826

1714. LEOPIZZI, F. Il modello del dipartimento ospedaliero. **[The model hospital department.]** *Ospedali d'Italia*, Roma, 1977, May, vol. 14, no. 5, pp. 14-37.

A round table discussion is presented during which five papers were read, on the introduction of a departmental structure into the Italian hospital, as envisaged in Law No. 148, dated 1975. Reasons for the delay in implementing this law are suggested: the Government, the doctors, and lack of financial resources may each or all be to blame. The need for a more democratic, less authoritarian structure is stressed, and the advantages of team work are described.

1715. MANKIN, D. C. and GLUECK, W. F. **Strategic planning.** *Hospital & Health Services Administration*, Chicago, 1977, vol. 22, no. 2, pp. 6-22.

Fifteen Missouri community general hospitals, stratified by size, ownership and complexity, were studied to analyse two aspects of hospital planning: whether hospitals use strategic planning; and if those who do are more successful in reaching their objectives. It was found that the hospitals did not formally plan their strategies in much detail even though they will be required to do so by law. The larger hospitals did a

better job in standardizing the process, but this seemed to be more form than substance. Few did an effective job in appraising the environment to anticipate major changes or opportunities. Objectives were not defined, choices were informal, and appraisal haphazard. The effective administrator will formalize strategic planning, but there is a need for more training for administrators in the art of strategic planning. The most important part of strategic planning is the hospital administrator's everyday use of a long-range plan and the formulation of decisions in accordance with the plan.

1716. JORDAN, P. Krankenhäuser und Dienstleistungen für Krankenhäuser. **[Hospitals and hospital services.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1977, May, vol. 18, no. 5, pp. 301-304, 307-314, 317-318.

Continuing advances in medical science and technology, changes in population structure and the incidence of disease, and a number of other factors make it essential that a hospital should be readily adaptable. To meet this need the author develops the concept of what he calls the 'dynamic hospital' as opposed to the 'conventional hospital'. The dynamic hospital would have the following characteristics: the construction should be such that changes could be made in a relatively short time; a special co-ordination system should integrate all hospital units; out-patient departments and day hospitals should avoid unnecessary admissions; and controlled access to hospital units for medical terms and/or patients from outside should be provided. One important feature of the dynamic hospital would be the removal of certain services from the hospital. A list is given of such services: this includes medical supplies; computer systems; laundry; storage and transport; and training. What are called 'dynamic regional service units' would administer and control these services.

1717. LOHFERT, P. Stand und entwicklung der krankenhausplanung. **[The state and development of hospital planning.]** *Krankenhaus Umschau*, Kulmbach, 1977, May, vol. 46, no. 5, pp. 338, 340, 342, 344, 346.

The development and present state of hospital planning is outlined and examples of past planning methods are given. An assessment is then made of the basic requirements for effective planning for the future. These include: the development of goals and concepts of health policy on the basis of precise data and analysis of cost effectiveness without regard to particular interests; regional planning and the planning of structure and development; data and information banks; the planning of functions and organization; and data banks for specific projects.

1718. LINGJÆRDE, P. Det somatiske sykehus: dets funksjoner og oppgaver. **[The functions and tasks of the general hospital.]** *Sykehuset*, Oslo, 1977, vol. 40, no. 4, pp. 177-190.

Hospitals have become very complicated institutions, with specialties and subspecialties reflecting the expansion of biological knowledge; the only person who can logically direct such an institution is someone with medical (biological) training. The tendency to appoint economists or professional administrators is an insult to the medical profession; it has nothing to recommend it, and cannot be shown ever to have resulted in either improvements or economies. A hospital has but one aim—to satisfy the needs of the proprietor, i.e. the patient. These needs are primary (the need for health, nursing, care and advice); secondary (accommodation); and tertiary (finance).

These three areas are catered for by the medical and nursing sector, the hotel sector and the financial-administrative sector. The medical side is divided between the three functions of: (i) diagnosis, treatment and nursing; (ii) training; and (iii) research and development. At the same time there is a marked tendency towards increasing the proportion of out-patient cases at the expense of the numbers of bed-days (which have declined from 13.5 on average in 1966 to 9.3 in 1973). This means that the patients who *are* retained in hospital generally require more demanding treatment and nursing than formerly. Average costs per patient-day, frequently quoted in Press criticisms of the Health Service, are meaningless: the real basis for comparison is what the community saves by having diseases and injuries cured. The article is illustrated by a functional diagram of the hospital, with the patient at the top of the hierarchy.

1719. Åhs, U. Utredning fastslår: Länsdelssjukhusen behöver upprustas för att fylla kraven. **[Investigation shows clearly that district hospitals need re-equipment to be able to fulfil the demands made on them.]** *Landstingens Tidskrift*, Stockholm, 1977, May, vol. 64, no. 7, pp. 11-13.

The Swedish Hospitals Rationalization Institute (Spri) has carried out an investigation into the activities of district hospitals in co-operation with the Swedish Medical, Surgical and Anaesthesiological Associations. District hospitals contain about a third of the acute hospital beds in Sweden. Eighty to 90 per cent of all medical cases and 60 to 70 per cent of surgical patients are non-acute cases (admission planned at least 24 hours in advance). For each function deemed vital, a minimum staff of at least six or seven must be on call: these functions involve the medical and surgical houseman rotas, the department of anaesthesiology, operating theatre, X-ray department and laboratories. Reductions in permitted working hours increase the numbers of salaried staff who must be on call. The district hospital's resources are well utilized where the catchment area comprises over 60,000 people; under 40,000 people there are problems of over-manning and difficulties of recruitment. Other clinics which may be provided in a district hospital (in addition to medical, surgical, anaesthesiological and intensive care units) are service units such as: radio-diagnostics; clinical, chemical and blood group serology laboratories; transfusion service; midwifery; long-term care; and specialist consultation facilities.

GOVERNING BODIES, COMMITTEES

1720. Åker, J. Rådsstrukturen på sykehus. **[Committee structure in the hospital.]** *Norsk Sykehustidende*, Oslo, 1977, May, vol. 50, no. 5, pp. 89-95.

A score or more of advisory councils and committees control and influence the work of the hospital. The Norwegian government propose the establishment of six further statutory committees: (i) a professional council, to advise on questions of diagnosis, treatment and care of patients; (ii) *ad hoc* sub-committees; (iii) departmental steering committees; (iv) departmental or ward councils; (v) individual ward councils; and (vi) general councils. The Association of County Councils stresses the danger of the exaggerated use of councils and committees, which occupy a great deal of staff time and produce confusing overlapping of functions. Out of all the statutory councils and committees, those with the main responsibility for running hospitals will be: (i) the hospital management committee; (ii) the staff consultative council; (iii) the depart-

mental steering committee; (iv) the administrative council; and (v) the professional councils and their sub-committees. The article is illustrated with a list of all statutory committees and two diagrams of their inter-relationships.

ECONOMICS OF HOSPITAL MANAGEMENT

See also Abstract Nos. 1690, 1691, 1708, 1735, 1738, 1759

1721. MORAN, A. D. and MOORE, W. R. **Energy conservation program saves $89,000.** *Hospital Progress*, St. Louis, 1977, May, vol. 58, no. 5, pp. 50, 52, 56-57.

De Paul Hospital, Norfolk, Va., decided in January 1976 to develop an energy conservation programme. The task of developing and implementing the programme was delegated to the plant and maintenance department. This paper describes the six phases in which the programme was developed: (i) determination of the programme's objectives; (ii) development of the hospital's energy consumption profile by evaluating and recording the previous three years' monthly consumption of gas, oil and electricity by unit price paid; (iii) design of energy consumption evaluation forms for each major hospital area selected for assessment in order to provide team workers with guidelines for rating an area's degree of efficiency in consuming energy; (iv) evaluation of all energy conservation recommendations submitted to determine their potential effects upon the safety and comfort of patients, visitors and staff and their potential impact upon other hospital systems; (v) selection of 13 recommendations for implementation (these are listed); and (vi) evaluation of the programme. In the first year of operation of the recommendations 279,000 gallons of fuel oil and $89,000 were saved.

1722. HEUER, M. Möglichkeiten und Grenzen der Rationalisierung, der zentralisierung und der Spezialisierung im pflegebereich. **[Possibilities and limits of rationalization, centralization and specialization in the field of care.]** *Krankenhaus Umschau*, Kulmbach, 1977, June, vol. 46, no. 6, pp. 501-507.

This is a general discussion on rationalization, centralization and specialization with particular reference to the nursing service. Aspects of rationalization are dealt with under two heads: (a) measures which affect only the nursing service; and (b) measures of general application. Under (a) the following are mentioned: functional or group nursing; planning and organization, including uniform nursing methods and team work; and nursing research. Under (b) reducing the length of stay, co-operation between hospitals and the restructuring of hospital management are discussed. A number of possible central services (including laundry, food distribution, patient transport, sterile supply, cleaning and the bed centre) are listed which could reduce costs. Specialization in nursing has been developing in West Germany in recent years with special emphasis on anaesthesia and intensive care. In 1974 a German Association for Specialist Nursing was set up to promote post-basic training in relation to the medical specialties.

RUNNING COSTS

See Abstract No. 1750

BED OCCUPANCY, ECONOMIC USE OF BEDS

See also Abstract Nos. 1692, 1718, 1775

1723. EGGELING, F. Grundsätze der Bettenbedarfsermittlung. **[Principles of providing for bed requirements.]** *Krankenhaus Umschau*, Kulmbach, 1977, May, vol. 46, no. 5, pp. 323, 324, 327.

The basic principles for determining hospital bed needs in Western Germany are discussed with special reference to Lower Saxony. Three main stages in the assessment of need, in ascending order of accuracy, are described: (i) 'mathematical needs I'; this is calculated from the empirical data of Lower Saxony hospital statistics, supplemented by spot checks mainly relating to admission frequencies for individual specialties; (ii) 'mathematical needs II'; this is obtained by correcting the determinants for the separate areas of the *Land*, made on a uniform basis; and (iii) 'corrected needs'; here factors specific to different areas are taken into account: these include the age and economic structure, birth rate, and the supply of facilities which relieve pressure on hospitals as well as the transfer of patients from one area to another for specific forms of treatment. The exact bed needs cannot however be determined in advance: the nature of diseases, advances in medicine, human behaviour and many other factors can vary.

1724. DEVLIN, H. B. **Planned early discharge.** *Update*, London, 1977, July 15, vol. 15, no. 2, pp. 125-126, 128, 130, 132, 134, 136.

North Tees General Hospital, Stockton-on-Tees, began a prospective study and randomized controlled trial of planned early discharge after surgery. This paper reviews the data about the first six years of the study. They show that planned early discharge can make a substantial contribution to the care of general surgical patients. However, it does impose its own strict discipline on the doctors, nurses and administrators, and although they may become apparently more efficient, their work load will probably increase. The clinical results of a carefully operated early discharge scheme bear favourable comparison with alternative traditional modes of surgical activity. There is no evidence that early discharge is socially or economically disadvantageous to the properly selected patient. It is stressed that planned early discharge must be carefully organized and tailored to suit the need of each patient in the scheme. Although it may produce significant savings of revenue and increased returns on capital invested, these resource reallocations will only be significant if the capital released by rationalization is put to alternative uses. To date the hospital has been unable to achieve this resource reallocation largely because of the lack of imagination shown by the contemporary health service management.

ELECTRONIC DATA PROCESSING

See also Abstract Nos. 1732, 1746, 1782, 1783, 1810

1725. BRAÜNER, E. Edb i sygeplejerskens hverdag, 2: bliver vi bedre sygeplejersker ved hjälp af datamater. **[Electronic data processing in the nurses' daily work, 2: do computers help us to become better nurses?]** *Sygeplejersken*, København, 1977, June 8, no. 22, pp. 4-5, 23.

Nurses must assist actively in the design and development of computer systems in the

hospital, or they will be developed without nurses' assistance. The computer is capable of automating paper work and many more or less routine tasks and calculations such as recording of blood pressure, pulse, temperature etc., freeing nurses for the task of looking after patients better. The intensive care unit of the anaesthesiology department at Herlev Hospital uses a modified (Danish language) Hewlett-Packard 5600A computerized patient monitoring system. The author, a sister in the unit since 1976, has evolved a 13-lesson teaching course for all users of the unit's terminals, from doctors and nurses to secretaries and laboratory assistants. The computer programme can be regarded as a series of forms arranged in a certain order; answers to the questions are displayed leading through a network of decisions like branches on a tree. The data of a patient newly admitted to the unit are fed into the computer, together with the diagnosis. Automatic recording of physical parameters is established, and the computer finds and displays all previous relevant data on the patient. A course of treatment is decided on, and control of the patient's salt-and-water balance is left to the computer, with status print-outs every 24 hours. The use of computers eliminates many sources of error from nursing routines, but demands a certain amount of change of attitude on the part of the nursing staff.

1726. En orientering on ØMI. **[A description of ØMI, the Norwegian economic and medical electronic data processing system for recording administrative and medical information about hospital patients.]** *Norsk Sykehustidende*, Oslo, 1977, May, vol. 50, no. 5, pp. 96, 98, 100, 102, 104-110, 112.

The Financial and Medical Information System (ØMI) is a computer system developed by the Norwegian central administration to process all administrative and medical information regarding patients. It came into use in 1972 and today covers some 150 institutions in 16 counties. The ØMI system was evolved in the basis of the following guidelines: (i) an information system covering: (a) the financial balance between individual institutions and the Health Insurance system; (b) statistics; and (c) medical information (diagnoses, operations and anaesthetics); (ii) coordination of: (a) forms; (b) definitions and classifications; and (c) information to the central authorities; (iii) a standardization system; (iv) county centre systems; and (v) certain given minimum coverage requirements. The system can print out reports covering such areas as: (i) financial state; (ii) bed occupation statistics; and (iii) medical records. The system is based on patients' personal identity numbers and functions at ward, county and national level. A series of safety measures is built in to safeguard the confidence of the information stored. An analysis of shortcomings in the system reveals as unsatisfactory: (i) the extent and structure of data; (ii) checks on stored data; (iii) waiting list functions; (iv) financial routines; (v) flexibility; and (vi) level of applicability to the day-to-day situation. The article is illustrated with a diagram of the routines involved in up-dating an institution's records.

1727. SKOUSEN, T. Edb i administrationen, 3: Edb-udviklingen kräver samarbejde mellem brugere og specialister. **[Electronic data processing in administration, 3: data processing developments demand co-operation between users and specialist staff.]** *Sygeplejersken*, København, 1977, June 15, no. 23, pp. 4-6.

The use of computers in the hospital system contributes to: increased therapeutic efficiency; improved co-ordination of the primary and secondary health services in the

individual administrative region; the provision of statistical information on which forward planning can be based; and an improved basis for medical research. On January 1, 1977 the Danish Ministry of the Interior introduced a budget and accounting reform using a financial planning and direction system entitled Oekonomisystemet. The aim of a hospital resources direction system is to provide information concerning: (i) consumption of resources at various levels of service, allowing choice of priorities to be made on the basis of reliable statistics; and (ii) the extent to which resources made available are used as intended. Responsibility for financial arrangement is delegated in a three-phase system: (i) overriding financial responsibility rests with the county council: (ii) only one person (or committee) is responsible for any one item on the budget; and (iii) the responsibility for ensuring the economic effectiveness of any item of expenditure is placed on that person in charge of the day-to-day spending of the sum concerned. The introduction of computer techniques in health service administration involves far-reaching changes in organisation and management.

1728. BURFEIND, R. **Schoitz Memorial inaugurates on-line computer system to cope with rapid increase in outpatient service needs.** *Hospital Topics*, Sarasota, 1977, May/June, vol. 55, no. 3, pp. 20-23.

In February 1976 the 325-bed Schoitz Memorial Hospital, Waterloo, Iowa, installed a Sperry Univac 90/30 computer system in its out-patient department. The system has a main memory of 131,000 bytes, an integral card reader, punch and printer, and five Univac 8418 disk drives with a total storage capacity of 230 million bytes. Three key punch units and seven Uniscope 100 display terminals, three equipped with attached printer units, complete the system. Two terminals are in the out-patient department, and one each in the laboratory, diagnostic X-ray, radiotherapy and physiotherapy departments and the computer room (for program development). The uses of the system are outlined.

LIBRARIES

See also Abstract Nos. 1699, 1795

1729. MATTHEWS, D. A. **Regional library services for health care communities in Canada and U.S.A. with special reference to the role of Library Schools. Final report arising from a study visit overseas to Canada and the U.S.A. 23 March-16 April 1976.** Aberystwyth, College of Librarianship Wales, 1976, 42pp.

A report is presented of a visit made to Canada and the United States in March/April 1976 to study regional health sciences library systems and the activity of schools of librarianship in relation to health care librarianship. The tour covered Halifax, Toronto, Hamilton and London in Canada and Detroit and Cleveland in the United States. An account of the significant elements of each system is presented. Regional systems are described with special reference to the Kentucky-Ohio-Michigan Regional Medical Library in Detroit. The relevance of the Regional Medical Library system to the United Kingdom is discussed together with library education and the health sciences. Considerable development in the United Kingdom is anticipated. The main conclusions and recommendations are analysed, and a list of references to material specifically referred to in the text included.

1730. THIES, J. B. **Shared modular hospital information systems.** *Hospital & Health Services Administration*, Chicago, 1977, vol. 22, no. 2, pp. 23-39.

The Health Services Research Centre of the Hospital Research and Educational Trust and Northwestern University recently completed a 22-month project to assess the effectiveness and potential contribution of the shared modular systems approach on the basis of a multi-hospital experience with a variety of systems applications. This paper describes the shared modular systems concept, the context of the evaluation study, the specific systems applications involved, and the major findings from the completed project. The project involved five hospitals associated with Samaritan Health Service ranging in size from 724 to 40 beds. A Digital Equipment Corporation PDP-15/20 computer was installed in October 1971 and the first application became operational in February 1972. Nine system applications ultimately became operational in five different areas: admissions and census; daily operations statistics; clinical laboratory; radiotherapy; and physician's continuing education. Aspects discussed include cost containment, manpower requirements, system use, availability of computer services and user acceptance.

MEDICAL RECORDS

See also Abstract Nos. 1726, 1728, 1771, 1779

1731. METCALFE, D. H. H. and others. **Innovations in medical records in the U.K.: report to King Edward's Hospital Fund on a survey of innovations in medical records in the U.K.** (King's Fund Project Paper No. 16) London, King's Fund Centre, 1977, 251pp. £1.00

This survey was commissioned by the King Edward's Hospital Fund in 1975 to establish the number of projects on medical records and information systems that were being undertaken in isolation, and the possible duplication of effort or gaps between potentially complementary projects that had developed. The report is in three sections: (i) an explanation of the cross-indexing system used and the index itself; (ii) descriptions of each of the identified projects grouped according to the medical areas in which the applications have been implemented; and (iii) a bibliography, index by project leader, and glossary.

1732. Le dossier médical. **[The medical record.]** *Informations Sociales*, Paris, 1977, nos. 3/4, pp. 98-105.

The *Assistance Publique* in Paris is responsible for the treatment of 500,000 in-patients and two and a half million out-patients each year. The records of all these patients are managed with the help of three automated or semi-automated systems. There are three kinds of record: (i) the record of the patient's stay in hospital, which is maintained primarily for accounting and administrative purposes and which is dealt with on-line; (ii) the patient's case history, which is kept for five years, and then stored in the archives; and (iii) records for research purposes, usually relating to specialist topics, e.g. records of all patients with a certain disease are relatively small in number and can be processed off-line. The author discusses problems such as the identification and location of records, methods of data storage, and standardisation of record summaries. He recommends the gradual introduction of computerised record management and careful consideration of costs, advantages, and disadvantages of the various options beforehand.

LEGAL ASPECTS OF HOSPITAL ADMINISTRATION

See also Abstract Nos. 1689, 1706, 1711, 1736, 1739

1733. DANKMYER, T. and GROVES, J. **Taking steps for safety's sake.** *Hospitals*, Chicago, 1977, May 16, vol. 51, no. 10, pp. 60-62, 66.

It is pointed out that risk management is new as a term but not as a concept. It also covers the prevention of losses from causes other than malpractice suits, for example workmen's compensation and property preservation. To implement a risk management programme, a risk manager should be appointed and a risk management committee established. Six steps should be taken to ensure that the hospital is doing all it can in the area of risk management: (i) identification of situations that could produce incidents that would result in financial loss; (ii) evaluation of incident reports; (iii) elimination of needlessly dangerous procedures; (iv) reduction in the level of risks; (v) ensure that the hospital is liable only for that which is of its own doing; and (vi) provide adequate insurance cover as economically as possible.

FINANCE AND ACCOUNTING

See Abstract No. 1798

FINANCE

See also Abstract No. 1742

1734. MARCUSSEN, K. Nytt finansieringssystem for helseinstitusjoner. [**A new financing system for health institutions in Norway.**] *Norsk Sykehustidende*, Oslo, 1977, April, vol. 50, no. 4, pp. 61-67.

A system of financing health institutions introduced in 1970, with central processing of all budgets by the Department of Social Affairs, proved unworkable in practice, and in 1975 a select committee was appointed to propose modifications. The report was presented in February 1977, and in principle advises the introduction of block grants on the basis of the overall cost of all institutional treatment provided for the population in a given region, instead of on the basis of the cost to the county of running its own health institutions. The system will favour counties with underdeveloped health services and result in smaller grants for e.g. Oslo, with its fully evolved health system. Three factors of vital significance to the introduction of the block grant system, after its acceptance by counties, are: (i) a new planning system for rolling four-year plans; (ii) long-term budgetting; and (iii) the Financial and Medical Information system ØMI [See Abstract No. 1726]. A new concept is to be introduced at the same time: the "out-county" or "guest" patient, whose costs will be refunded in full. The article is illustrated with tables demonstrating the basis on which block grants will be calculated; the economic effects of the new system county by county: and a timetable for its introduction.

1735. FELDSTEIN, M. and TAYLOR, A. **The rapid rise of hospital costs.** (Discussion Paper No. 531) Cambridge, Mass., Harvard University, Institute of Economic Research, 1977, 72pp.

This report to the Council on Wage and Price stability emphasizes that the increase in hospital costs in the United States is fundamentally different from the problem of inflation in other sectors of the economy. The increase in costs of hospital care reflects a change in the character of services rather than a higher price for an unchanged product. The primary reason is that patients are now more willing to pay for expensive care since insurance now finances a larger share of these payments. The evidence is presented in five sections and summarized.

HOSPITAL ACCOUNTING

See also Abstract No. 1727

1736. CANCELLIERI, E. Il fisco contro l'ospedale. **[The treasury versus the hospital.]** *Ospedali d'Italia*, Roma, 1977, May, vol. 14, no. 5, pp. 78-81.

The Italian Government has obliged pharmaceutical firms to allow the hospitals a 50 per cent discount on the retail price of the drugs supplied, and to debit Value Added Tax on the discount. This ruling conflicts with the original VAT law which rules that this tax should not be levied on sums which are not invoiced or received. Moreover, hospitals are exempt from VAT. The situation is very confused and may have to be clarified in the law courts.

SUPPLIES AND STORES

SUPPLIES

1737. KRUMREY, N. A. **Equipping a new hospital: bringing method to the madness.** *Hospitals*, Chicago, 1977, June 16, vol. 51, no. 12, pp. 109-110, 112, 114.

This paper focuses on the acquisition and installation in a new hospital of basic capital equipment, which generally can be moved and installed easily by trained men. Equipping a new hospital involves quickly shifting and sometimes overlapping phases. Consequently, considerable co-ordination is required between the hospital administration, user departments, purchasing department, supplies department, architect, builder, trade unions, and other interested parties. Detailed procedures are presented, using the procurement of operating theatre tables for St. Anthony's Medical Center, St. Louis, as an example. These procedures can help to organize this effort efficiently and protect the hospitals' interests regarding costs, specifications, acceptability and safety.

1738. HENNING, W. K. **Managing materials in today's hospital.** *Hospitals*, Chicago, 1977, June 16, vol. 51, no. 12, pp. 82-86.

Reasons for the increased interest in materials management in hospitals are outlined and the term materials management is defined. In developing a hospital-wide materials

management system, there are four areas of responsibility for the administrator and his staff: (i) management of the system; (ii) assurance of availability; (iii) assurance of quality; and (iv) asset expense management. The materials manager must be at least an assistant administrator to ensure the co-operation of department heads. Elements of a programme to implement a materials system include: (i) the establishment of a programme; (ii) the study of all aspects of the problem; (iii) the setting of goals; (iv) forming a plan; (v) motivating middle-level management; (vi) follow-up.

1739. TABAKA, A. V. **Hospitals join Washington to battle product problems.** *Hospitals*, Chicago, 1977, June 16, vol. 51, no. 12, pp. 93-94, 96.

Product safety has become more important in health care because of the increase in malpractice lawsuits in which products are involved and because of the greater role of legislation in affecting product quality. The Medical Device Amendments of 1976 to the Food, Drug and Cosmetic Act provide the Food and Drug Administration with new authority to ensure the safety and the effectiveness of medical devices. The primary intent of this legislation is to control the manufacture and distribution of devices. However, materials managers have a direct interest in the legislation, because it establishes standards for many items that are purchased. The materials manager has a key role in ensuring that products expose his hospital to minimal risk; the ways in which he can do this are outlined.

PURCHASING

See also Abstract No. 1737

1740. HOUSLEY, C. **Establishing total material management.** *Dimensions in Health Service*, Toronto, 1977, July, vol. 54, no. 7, pp. 18-21.

Fundamental precepts to keep in mind when starting materials management schemes are: there is no set starting place; timing is important; and it cannot be planned and executed by one person working in a vacuum. Top management support is essential whether the current purchasing organization is developed or a director is appointed from outside the hospital. Points to consider when selecting a materials manager include: managerial potential; written job description; salary; and demonstrated ability. The establishment of objectives is an essential part of the planning and implementation phase; a model set of objectives is presented. Materials management may include only purchasing, central stores and central supply, or all supply, processing and distribution; some hospitals include the mortuary, laundry, housekeeping, waste collection, and even data processing. Orientation of staff, particularly key staff, is essential. There should be periodical evaluation of the performance of materials management.

1741. BOERGADINE, L. C. **Committees ensure cost efficiency in purchasing.** *Hospitals*, Chicago, 1977, June 16, vol. 51, no. 12, pp. 133-135.

This paper discusses purchasing committees in general and the product evaluation committee, standardization committee, and forms committee in particular. The goals and purposes, membership, and basic guidelines and procedures for each of these committees are discussed. Purchasing committees are essential for effective materials

procurement and management. They perform not only initial evaluation of materials and supplies but also ongoing evaluation. Thus, they help to ensure that the hospital obtains and maintains appropriate quality, quantities, and cost effectiveness in its purchases and its inventory.

1742. HIXSON, R. L. **Capitalizing on capital purchases.** *Hospitals*, Chicago, 1977, June 16, vol. 51, no. 12, pp. 119-120, 122.

The acquisition of capital equipment is considerably more involved than the purchase of supply items. Because of the long life of capital equipment, errors in judgment at the time of acquisition have a lasting effect. Alternative purchasing options are buying with working capital, financing, and leasing. Their advantages and disadvantages are discussed, and the use of shared service purchasing associations is outlined. Factors to be considered when purchasing capital equipment include warranty period, servicing facilities, and freight charges.

1743. WHEELER, D. L. **Negotiating and bidding for good results.** *Hospitals*, Chicago, 1977, June 16, vol. 51, no. 12, pp. 125-126, 128, 130.

When determining a method of procurement, the purchasing manager must remember his goals. Whether it be by tendering, negotiating, or open-ended contracts, the method chosen is a means of obtaining savings for the hospital and, ultimately, for the patient. The advantages and disadvantages of each of these methods are discussed.

QUALITY CONTROL

1744. PILOT, L. R. **Medical devices are everybody's business.** *Hospitals*, Chicago, 1977, June 16, vol. 51, no. 12, pp. 89-92.

The implications for hospital materials managers of the Medical Device Amendments of 1976 to the United States Food, Drug, and Cosmetic Act are discussed. Ways in which materials managers can co-operate with the Food and Drugs Administration (FDA) are outlined. Examples of problems reported to the FDA and for which corrective action was taken include: incorrect sizes on tracheostomy tubes; mislabelled decolourizer; revised directions; and incorrect advertisement.

STORES

See also Abstract No. 1744

1745. HOUSLEY, C. E. **Distributing the goods the right way.** *Hospitals*, Chicago, 1977, June 16, vol. 51, no. 12, pp. 103-105.

Important among the functions of materials management is the effective and efficient distribution of supplies and equipment throughout the hospital. The traditional reverse distribution process in which nursing or other departmental staff go to the central stores to collect supplies is a costly, inefficient use of manpower. Alternative methods include the par level transfer system and the exchange trolley system. The supplies distribution system of the future will probably be built around a trolley, but

the method of distributing the trolleys will continue to be debated. The advantages and disadvantages of manual and automated systems are discussed.

1746. STAFFORD, D. **Monitoring materials flow through inventory control.** *Hospitals*, Chicago, 1977, June 16, vol. 51, no. 12, pp. 99-101.

There are four widely used inventory control systems: manual two-bin system; travelling requisition system; kardex manual system; and computerized system. Each of these is described and their advantages and disadvantages are discussed. No one system stands out as the system of choice for all hospitals. Each materials manager must single out those criteria that are most essential to him and his operation, compare the various systems in terms of those criteria, and choose the one system that ranks high most consistently.

CATERING, DIETETICS, KITCHENS

HOSPITAL CATERING

1747. CASEY, T. **How to determine dietitian staffing requirements.** *Hospitals*, Chicago, 1977, May 16, vol. 51, no. 10, pp. 82, 84, 86-87.

This paper describes a productivity study in the catering department of a large teaching hospital. The department employs 187 people, serves 4,600 meals and has a budget of more than three million dollars. For purposes of analysis the department was divided into eight functional areas: nutrition; menu verification and handling; patient tray assembly; utility; production; cafeteria and fast foods; administration; and management. The research methodologies are described. The last part of the paper describes how the staffing model was used to determine dietitian requirements. The steps in the staffing model are: (i) identify the major or primary task that must be performed; (ii) identify the key variables that affect the primary function of the workers; (iii) establish how bed census or patients relate to the primary function; (iv) determine the constraints or boundaries within which tasks must be performed; (v) make realistic assumptions about the tasks that must be performed; (vi) develop standards; and (vii) project staff requirements according to numbers.

1748. BANEKE, J. C. H. NOR-project: normalisatie van diëten houdt in principe in: afspraken maken. **[NOR (Organization and Standardization of Food Provision in Institutions) project: standardization of diets in practice as well as in principle.]** *Voeding- en Huishoudgids*, Amsterdam, 1977, April, vol. 44, no. 531, pp. 205, 207, 209, 211.

In order to describe a certain diet one must know how it differs from normal: by limitation, enrichment, elimination or in consistency. The central factor in the NOR standardisation of diets project is the consumer (patient). The requirements of the various groups of consumers must be tabulated. When the food pattern is established, the menu pattern can be determined. The more service one is prepared to offer, the more flexible the supply system must be. The flow of information and goods must be co-ordinated. An illustration is given of a flow-chart designed on military logistics

lines. The composition of dishes is agreed on the basis of their basic ingredients, quantities and way of preparation. Recipes must be in writing, each institution making its own cookery book on the basis of the agreed principles. When all recipes conform to the agreement, uniformity of quality is obtained, good staff planning is possible, cost can be kept under supervision and orders carried out correctly, and the demands of special diets can be safely met.

DIETETICS IN THE HOSPITAL

See also Abstract No. 1808

1749. HEEK, B. van. Normalisatie in de opleiding: hoe recepturen worden vastgelegd bepaalt keukenleding zelf. **[Standardization in (dietary) training: recipe ingredients must be laid down by cooking specialists.]** *Voeding- en Huishoudgids*, Amsterdam, 1977, April, vol. 44, no. 531, pp. 213, 215, 217, 219.

Dietitians should be trained to stay one step ahead of present attempts at standardization. Important points are: detailed listing of diets, declaration of contents in terms of foodstuffs; definition of serving units; lists of foodstuffs and dishes; lists of nutritional values and classification; lists of recipes and of standard equivalents. Cooking lessons should be adapted for standardization and theoretical examples worked out in serving units. Each institution should have its own individual recipes in writing, so that the dietitian knows what is in them. Recipes may be defined by the individual cook, by group decision, or by the head cook of the institution; they may be taken from existing cookery books; a commission may define the recipes; or existing recipes may be critically surveyed. How the recipes are written down depends on the requirements of the institution. It may be per portion or several portions; per one or more serving units; with or without exact instructions for preparation; with or without code or classification of ingredients; with or without cost price; quantities by weight or by numbers of tins, bottles, etc., or a combination of these. If the information is to be processed by computer, quantities must be clearly stated in grammes. In every case, a recipe card must bear the name of the dish, number of portions or serving units, and a list of ingredients. The article is illustrated with several examples.

FOOD SERVICE

1750. KERSHAW, P. **Austin hospital saves $40,000 on wages.** *Australian Hospital*, Prahran, 1977, May, no. 8, p. 5.

The cafeteria at Austin Hospital, Melbourne, is principally for staff, but is also open to casualty patients, ambulance staff and relatives of patients. This paper describes the development of a vending machine system to replace the conventional service now provided. The service will be available 24-hours a day (the cafeteria at present closes at 20.00) and will provide breakfast, lunch, dinner, snacks, sweets and hot and cold drinks. Brief details are given of the equipment to be used and the types of meals being made available. The new system will reduce staffing needs by three full-time and three part-time staff.

1751. PATRICK, A. **Robots in the kitchen.** *Dimensions in Health Service*, Toronto, 1977, June, vol. 54, no. 6, pp. 22, 24.

At the 430-bed Queen Street Mental Health Centre, Toronto, all food and supplies are delivered by computerized, battery-operated vehicles guided by an electronic signal from a wire buried in the floor. The vehicle itself, or Amscar, is a flat-bed about four feet by 20 inches with an upright console, at the forward end. The computer memory bank and controls for manual handling are in the console. It can carry a load of up to 1,000 pounds at a speed of one mile per hour. The system delivers food to the staff cafeteria and to ward serveries, from which the majority of patients are served cafeteria-style. Therapeutic diets are served from a centralized tray assembly area, but are also delivered by Amscar. Brief details are given of the specially designed modules which are used for delivering food. The longest food service trip is 14 minutes. Some advantages and disadvantages of the system are discussed. The trepidation with which catering staff viewed the system before it was installed was overcome by thorough briefing, familiarization and orientation programmes and they have reacted well to it.

LAUNDRIES AND LINEN SERVICE

HOSPITAL LINEN AND TEXTILES

See Abstract No. 1763

HYGIENE IN THE HOSPITAL

HOSPITAL INFECTIONS

See also Abstract No. 1754

1752. YOUNG, V. M., editor. **Pseudomonas aeruginosa: ecological aspects and patient colonization.** New York, Raven Press, 1977, xvii, 137pp. £12.00

The occurence of *Pseudomonas aeruginosa* in soil, water, plants and sewage is discussed. The organism is an 'opportunistic' pathogen and the methods by which it reaches the hospital and home environment from its natural environment are considered. Various reasons are postulated why *P. aeruginosa* readily becomes a major problem in treating burn patients and chronically debilitated patients.

SOURCES OF INFECTION

1753. JENSEN, A. A. Febertermometre—et forureningsproblem. **[Thermometers —a pollution problem.]** *Tidsskrift for danske Sygehuse*, København, 1977, April, vol. 53, no. 4, pp. 56-58.

All thermometers used in Denmark are imported, mainly from E. Germany, and consumption is of the order of a million a year, corresponding to two tons of mercury.

The bulk of this consumption comprises replacements for broken thermometers, implying that two tons of mercury a year go on rubbish dumps or out of the chimneys of incinerators. This represents the most serious source of mercury pollution apart from discharged hearing aid batteries, which are now being collected. A questionnaire sent to all the hospitals in Denmark (14,319 beds) revealed an annual consumption of 105,242 thermometers, or 7.4 per bed; this figure corresponds with, for example, Canadian experience. A thermometer is thus used some 45 times before it breaks. The remaining 200,000 + clinical thermometers are sold to clinics, institutions and the public. It is proposed that all clinics and hospitals should install apparatus to collect broken thermometers and that thermometers sold privately should carry instructions for disposal when broken. There are 15 references (3 English).

PREVENTION AND CONTROL

See also Abstract Nos. 1752, 1760, 1789

1754. McINNES, B. **Controlling the spread of infection: a programmed presentation.** 2nd edition. St. Louis, Mosby, 1977, xv, 123pp. £4.80

The book uses the format of programmed learning to present the basic details of asepsis that can be applied to the nursing management of infectious diseases and the control of the spread of infection both in the hospital and community setting. Topics covered include: the microscopic enemy; asepsis; and practical ways of controlling the spread of infection—the nursing process. A glossary and a bibliography are included.

1755. KAHNT, R. Gedanken zur Bekämpfung des Hospitalismus. **[Thoughts on combating hospitalism.]** *Öffentliche Gesundheitswesen*, Stuttgart, 1977, June, vol. 39, no. 6, pp. 331-333.

The importance of controlling hospital infections is recognized in Western Germany and in 1976 the Federal Health Office published guidelines to this end. But these guidelines are said to have three disadvantages: they are far too perfectionist; they ignore the fact that clinicians and technicians know little of hygiene; they are labour-intensive and would increase the cost per patient day. A simpler solution to the problem is put forward: the appointment of hygiene nurses on the British model but adapted to German conditions. These nurses—of senior status—would be independent of the hospital hierarchy and would work in collaboration with the medical officer of health and the director of the public health laboratory service. In small hospitals these nurses could have other duties as well, but elsewhere the job should be a full time specialist one. Suitable nurses, aged say between 30 and 45, should be given special training at the Düsseldorf Academy of Public Health and possibly also at other centres.

HYGIENE IN THE OPERATING THEATRE

See Abstract No. 1756

STERILIZATION

See also Abstract No. 1761

1756. PEDERSEN, K. Dekonterminatorers anvendelsesmuligheder til desinfektion og rengøring af utensilier: valg apparatur til desinfektion bør overvejes nøje. **[Possible uses of decontaminators in disinfecting and cleaning utensils: careful thought is needed in choosing disinfecting apparatus.]** *Sygeplejersken*, København, 1977, April 20, no. 15, pp. 8-9; May 11, no. 18, p. 23.

This article concludes a series of four on sterilization in Danish hospitals. [See Abstract Vol. 17, No. 996.] A decontaminator resembles a washing-up machine (dish-washer), utensils being cleaned by a spray of water and detergent in about two to six minutes. When contemplating purchase of a decontaminator, decisions will have to be made about capacity of machine, who is to operate it (cleaners or nursing staff), and siting (preferably in the 'contaminated' side of the sluice, by the hatch leading to the clean side). Care in loading is of vital significance to the efficiency of the decontamination process, as is the choice of detergent. The detergent container must never be allowed to empty completely. The water must enter under reasonably high pressure, and should be pre-softened if possible. Decontaminated materials may only be touched with clean hands, and working routines in the sluice must be arranged in order to ensure this. The alternatives available are: (i) the decontaminator, suitable for the sluice on a general ward; (ii) the combined decontaminator, for isolation, intensive care and acute admissions wards; and (iii) large and small bed-pan rinsers, for bed wards. The article is illustrated with a photograph of a dish-washer and a decontaminator being filled, and a table of alternative decontamination equipment.

AIR HYGIENE

1757. BREWIS, E. L. and ROBERTSON, H. **Practical aspects of nursing children under the laminar flow—1.** *Nursing Times*, London, 1977, July 21, vol. 73, no. 29, pp. 1120-1124.

The laminar flow unit, used for leukaemic children with a low neutrophil count, provides a pathogen-free environment but does not isolate the child as does a plastic cubicle. The laminar flow is a curtain of air round the patient. The cabinet stands behind the bed with an overhead canopy attached. Air is drawn into the cabinet by a fan and side filters remove bacteria and viruses. The air is further filtered before being drawn into the plastic head of the canopy. Plastic curtains increase the working area and the floor is marked by block tape, over which other children in the ward may not tread. The entire area is washed daily, bed linen changed and all items of daily use sterilized. Gamma-irradication is used to sterilize some foodstuffs and toys and Milton is used for melamine crockery. Instruments are autoclaved or irradiated. A sterile diet may have to be used and routine specimens are taken daily. Nurses attending the child must wear a mask, cap and gown and, after instruction, parents may help in caring for their child.

DISPOSAL OF WASTE

1758. ANNA, O. and HARTUNG, C. Probleme der Müllbeseitigung im Krankenhaus als Folge des technischen Fortschrittes. **[Problems of waste disposal in hospitals as a result of technical progress.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1977, June, vol. 18, no. 6, pp. 354, 357.

The disposal of infectious hospital waste presents a number of problems. One

solution proposed is that such waste should first be sterilized in suitable steam pressure containers and then treated as normal 'domestic' waste. The following supplementary measures for waste disposal are put forward: central disposal of infectious waste; improving the structure of waste and a reduction in the amount of 'critical' material; more research; enforcement of existing regulations relating to hygiene and the protection of the environment.

1759. BÖRNER, H. and SCHWARTZ, M. Wirtschaftliche Beseitigung Krankenhausabfällen unter besonderer Berücksichtigung der Abfallklassifizierung. **[The economic disposal of hospital waste with particular reference to the classification of waste.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1977, June, vol. 18, no. 6, pp. 358-362.

It has been estimated that West German hospitals produce some 700,000 tonnes of waste annually or an average of 3 Kg. per bed/day. Disposal methods vary greatly and the amount incinerated in individual hospitals can range between 10 per cent and 100 per cent. With incineration costing about DM 200 per tonne the annual cost of incinerating all hospital waste would be about DM 140 m. A working party has drawn up guidelines for classifying waste to ensure that disposal methods match requirements and that expensive incineration (which in small hospitals can be uneconomic) is not used for waste which could be disposed of in the same way as domestic waste. While waste which could be infectious must be incinerated (and in the case of highly infectious material, pre-sterilized) a great deal of other medical waste (including disposables) can be treated as domestic waste.

1760. HEYER, H. Probleme bei der Beseitigung von infektiösem Müll aus der Sicht des Leiters der Verwaltung eines Grossklinikums. **[Problems in the disposal of infectious waste from the point of view of the administrative head of a large hospital.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1977, June, vol. 18, no. 6, pp. 362-364, 367.

Infectious waste is here defined as: body parts or organs from pathology, surgery, and obstetrics and gynaecology departments; waste materials listed in the Federal Infectious Diseases Act whose destruction is obligatory; experimental animals; straw and excrement from animal experiment units; and medicaments. At the Hannover Medical School Hospital such material is put at the site into red-coloured plastic waterproof sacks and transported to the incinerators. The amount of infectious waste per bed/day is between 1.6 and 2.0 kg. or a total of 2500 kg. per day.

1761. RUPP, H. Betrieb von Sterilisatoren zur Beseitigung krankenhausspezifischer Abfälle. **[The operation of sterilizers for the disposal of waste specific to hospitals.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1977, June, vol. 18, no. 6, pp. 368-371.

The system of sterilizing hospital waste before disposal described here is known as 'sterilization of infectious waste in special steam pressure containers'. Containers are of three capacities: 3 cu.m. (5,400 kg.); 7 cu.m. (9,300 kg.); and 14 cu.m. (16,000 kg.). Sterilization time, with 75 per cent of capacity used, is from 50 to 65 minutes. The cost for 286,000 kg. a year works out at about DM 0.23 per kg.

SAFETY MEASURES

See Abstract Nos. 1733, 1739

FIRES AND FIRE PREVENTION

1762. **Test burn of simulated podium deck for new Liverpool hospital.** *Fire*, Tunbridge Wells, 1977, July, vol. 70, no. 865, pp. 69-71.

The new Royal Liverpool Hospital, now nearing completion, has a mainly single-storey podium covering some 4.5 acres with two connected towers rising from it. The integrity of the podium structure in the event of fire with particular reference to means of escape was queried by the fire authority. This paper reports an experiment carried out at the Fire Research Station on a test rig measuring 15 by 20 metres representing one section of the hospital podium. Forty-one minutes after a fire was started in the rig, steel beams and purlins over the fire chamber collapsed, bringing down part of the roof. The conclusions drawn from discussions of the test data and examination of videotapes and photographic records are outlined. It was decided that moderate protection of all beams and columns heads at risk, particularly in zones of weakness, would improve the stability of the supporting structure to prevent the type of roof collapse seen during the course of the fire for at least 60 minutes. The estimated cost of this was £100,000, compared with the estimated cost before the experiment of £1.8 million for full protection.

1763. LAU-NIELSEN, E. Brandrisikoen på hospitaler og plejehjem, 3: sengetøjet er en vigtig faktor for brandsikkerheden. **[Fire risks in hospitals and nursing homes, 3: bedclothes are an important factor in fire resistance.]** *Sygeplejersken*, København, 1977, April 20, no. 15, pp. 18-19.

The quantity of inflammable material—mattresses, sheets and duvets—in a room is an important factor in assessing the fire risk. Certain man-made fibres employed in bedding are highly inflammable and, once lit, melt and drip, burning, on to the floor. The Danish Fire Prevention Committee carried out a test involving placing a fire of methylated spirits and newspaper in a wastepaper basket beside a bed whose bedding was made of the Japanese flame-proof material 'Cordelan'. After two minutes the basket had burnt out without igniting the bedding. Comparative tests were then performed on beds made up of 'Cordelan', conventional bed-linen and eiderdown, and 'foam rubber' (polyether) mattress and polyester-filled pillow and duvet with non-iron polyester 'linen'. Each was ignited by a methanine tablet, which generates as much heat as a burning cigarette. In the 'Cordelan' bed the tablet burnt out without the scorch spreading further than an inch. In the conventional bed, the duvet caught fire and about half of it had burnt out in four or five minutes. The man-made fibres bed produced heavy smoke within five minutes; within seven minutes the whole bed was in flames, and one minute later the bed was emitting dangerous levels of radiant heat whilst molten plastic ran burning about the floor. The article is illustrated with four photographs showing each of the four tests.

THE PATIENT

ADMISSION AND RECEPTION

1764. CROW, J. **How and why to take a nursing history.** *Nursing Times*, London, 1977, June 23, vol. 73, no. 25, pp. 950-957.

The best method of obtaining the information for a nursing history is by structured interview. The questions asked fall within seven categories: (i) personal data; (ii) perception/expectation data; (iii) physical/safety data relating to daily living activities; (iv) social/interpersonal data; (v) community care data; (vi) outline of planned medical care; and (vii) summary of main points in nursing history. The individual questions in each category are listed with the reasons for their inclusion alongside. In testing this form of history, three issues emerged: (i) the problem of confidentiality; (ii) it is necessary to be aware of the patient's unexpressed feelings and to build a mental picture of his normal environment by relating each of his answers; and (iii) a greater amount of information available about a patient can be obtained after 40 minutes with him than can be obtained from the Kardex based on observation of the patient for 24 hours after his admission.

WELFARE OF THE PATIENT

See also Abstract Nos. 1779, 1808, 1814, 1827-1830

1765. BERGMANN, T. Das notwendige Übel: die Angehörigen: Ein Plädoyer für ihre Entdeckung. **[The necessary evil: relatives and dependants. A plea for their discovery.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1977, May, vol. 18, no. 5, pp. 319-324.

While at present, in Austrian hospitals, the relatives of in-patients are given little information or advice about the care and treatment of patients the situation is different while the patient is being looked after at home either before or after in-patient treatment. Here the home nurse plays a very important role not only with regard to nursing care but also by giving advice to both patients and their relatives and by lending a sympathetic ear to the patient's worries. The home nurse, working away from the hospital hierarchies, has a better opportunity for personal care. What would be desirable—but is perhaps utopian—would be foı relatives to take a much more active part in in-patient care: what might be called 'rooming-in for adults'.

1766. EPPERSON, M. **Families in sudden crisis: process and intervention in a critical care center.** *Social Work in Health Care*, New York, 1977, vol. 2, no. 3, pp. 265-273.

A study was carried out at the Maryland Institute for Emergency Medicine, a special care centre equipped to treat accident victims, to determine the needs of families under sudden and severe stress. Members of such families appear to go through six distinct phases, to a greater or lesser degree and not all at the same time, before regaining their former stability. The first phase is a unified one of great anxiety, to which the staff respond by giving brief information about the patient's condition and the life-saving methods of the Institute. Then follows the phase characterized by denial of the situation,

which seems to act as a preparation for any further bad news. The next phase of anger may be directed within the family, possibly at the victim himself, or else at the medical staff, or indeed society in general. The ventilation of these feelings should be encouraged. The phase of remorse includes elements of guilt or sorrow in which the family blame themselves and it is important to point out that, as is usually the case, they are not to blame. The grief phase usually follows, its duration and intensity depending upon the condition of the patient and the solidarity of the family. Reconciliation is the best way to describe the final phase when the family really faces the fact that a tragedy has happened which will deeply affect it. At this stage, the social worker can help the family to plan the future.

HOSPITAL SOCIAL WORK

1767. WATTENBERG, S. H., MILLER, M. and O'ROURKE, T. W. **Comparison of opinions of social work administrators and hospital administrators toward leadership tasks.** *Social Work in Health Care*, New York, 1977, vol. 2, no. 3, pp. 285-293.

The article reports on the attitudes of hospital administrators and social work administrators towards leadership tasks performed by social workers in hospitals. A study took place in 17 hospitals in a health area in Illinois. The two types of administrators were asked about the importance and frequency of performance of 12 leadership tasks and the answers were evaluated by use of a scale. Participating in planning for improved patient care and developing training schemes were ranked most important by both groups. Lesser importance was placed by both groups on taking part in long-term planning, and formal teaching of medical students also had a low priority. Both groups thought the leadership tasks in question were all performed infrequently and that acting as an advocate for the patient and his family was the task performed most frequently. A similar study performed in 12 teaching hospitals showed formal and clinical training to be rated more highly, and the social work administrators considered the tasks more important than did the hospital administrators. Detailed results are given in two tables.

1768. BERKMAN, B. and REHR, H. **Seven steps to audit.** *Social Work in Health Care*, New York, 1977, vol. 2, no. 3, pp. 295-303.

The paper discusses the implementation of audit studies in the field of social work in hospitals. A system, based on the study of patient's social needs and how far the patient feels these are met, is described in seven steps. Firstly, the questions to be answered, such as, who was served and by which service, need to be determined. The second step is: to achieve close collaboration between the researchers conducting the audit and the social work staff; and to clarify any ethical problems relating to research involving people. Thirdly, the concepts involved must be specified, and independent and dependent variables defined. Sample selection forms the next step and care must be taken to define a 'case', and decide for example, whether interviews should be carried out and whether a patient's family should be included in consultations. Patients selected who cannot be traced must be taken into account, as data concerning them will be incomplete. The method of data collection must be determined such as whether to use questionnaires the respondent fills up for himself, or the interview approach. The final step is the analysis and interpretation of findings, when the design of the study should be borne in

mind and the data discussed with social work staff. An audit of this kind is invaluable in answering the questions posed by consumers, other medical staff and funding agencies.

1769. PFOUTS, J. H. and MCDANIEL, B. **Medical handmaidens or professional colleagues: a survey of social work practice in the pediatrics departments of twenty-eight teaching hospitals.** *Social Work in Health Care*, New York, 1977, vol. 2, no. 3, pp. 275-283.

This paper, based on questionnaire data collected in 1975, examines the current role and activities of social workers in the paediatric departments of 28 large teaching hospitals in the United States. The universal staffing pattern was one in which the medical social workers served as administrators, supervisors and case workers. The extent to which they held academic rank varied widely, but many were clinical instructors. The average ratio of medical social workers to general hospital beds was one to thirty, but in paediatric departments the average rose to one to 24. Sources of referral were most often doctors and nurses, but case-finding by the hospital's social service department came next—an indication of increasing professional autonomy. Every area of paediatrics is served by a medical social worker, but there is little professional consensus about which groups are most likely to benefit. A large number of medical social workers (93 per cent) were involved in medical rounds and the same percentage were engaged in teaching activities. Some respondents had colleagues working on social work research teams, but there was a lack of commitment in this area. Demonstration through direct service was considered by 93 per cent to be the most important role of the social worker, followed by teaching and consultation.

THE GENERAL PRACTITIONER AND HIS PATIENTS

1770. FRY, J. **Comparisons of patterns of work in hospital specialist and general practice.** *Allgemeinmedizin International-General Practice*, Dortmund, 1977, vol. 6, no. 2, pp. 83-86.

In a typical district under the British National Health Service there are 100 general practitioners and 150 hospital doctors (50 consultants or trained specialists and 100 junior doctors). A general practitioner averages 175 consultations a week (160 at his surgery and 15 at patients' homes): for hospital consultants these figures vary according to specialty (from 25 for psychiatry to 140 for dermatology or accidents/orthopaedics). The types of illnesses dealt with by general practitioners and consultants also varies greatly and this is set out in a table showing average figures for 26 different diagnoses.

1771. WOOD, J. **Links in the paper chain.** *Health & Social Service Journal*, London, 1977, July 15, vol. 87, no. 4549, p. 1048.

Despite reorganization of the National Health Service, deficiencies in communication between the general practitioner and the hospital remain. This paper briefly discusses some of the problems and suggests how they may be overcome simply. Three sample forms are reproduced: (i) form for notification of all departments and the patient's general practitioner of a patient's death; (ii) card for the general practitioner to complete when hospital patient dies at home; and (iii) joint drug/appointment card.

TRANSPORT OF PATIENTS

1772. SCHEID, W.-M. Zur Beurteilung der Wirtschaftlichkeit automatisierter Transportanlagen für Krankenhäuser-die Bedeutung der Kapitalkosten. [**On the assessment of the economic viability of automated transport installations for hospitals—the significance of the capital costs.**] *Krankenhaus Umschau*, Kulmbach, 1977, June, vol. 46, no. 6, pp. 511-514.

The author discusses the many and varied factors involved in determining the cost-effectiveness of automated internal transport installations in hospitals. Tables have been prepared showing the useful life of various systems and components of systems. Depreciation and useful life can vary according to the amount of use and the standard of maintenance.

HOSPITAL CARE

See also Abstract Nos. 1712, 1725, 1757, 1768, 1785, 1796, 1802, 1829

1773. BOWER, F. L. **The process of planning nursing care: a model for practice.** 2nd edition. St. Louis, Mosby, 1977, xii, 153pp. £4.70

A conceptional framework is presented to enable nurses to develop increased skills in decision making as the process of planning care. The concepts of holism, stress response and nomeostatis are considered and form a theoretical model for the identification of nursing problems. A bibliography is included.

1774. RUBIN, I. and others. **Improving the coordination of care: an educational program.** *Hospital & Health Services Administration*, Chicago, 1977, vol. 22, no. 2, pp. 57-70.

The Health Team Development (HTD) programme, based on applied behavioural science concepts and techniques already proven to be effective in non-health care settings, is a self-instruction programme specifically designed to help health workers improve the co-ordination of care delivery. Its overriding objectives are to: (i) help a team solve specific task-related problems and to function more effectively right away; and (ii) provide the team with a set of skills and concepts which they can apply in the future as similar problems develop. The programme consists of two phases: core work and optional resource modules. The core work phase consists of seven three-hour sessions or modules involving activities aimed at: (i) assessing team performance; (ii) and (iii) clarifying goals and priorities; (iv) and (v) clarifying, defining and changing roles; (vi) improving decision-making; and (vii) planning for the future. The optional research modules deal with the following specific problem areas: (i) bringing new members onto the team; (ii) running a better meeting; (iii) developing shared leadership responsibilities; (iv) improving the feelings members have for one another; (v) interacting with other parts of the organization; and (vi) getting feedback from patients. An analysis of the results of the use of HTD in 13 situations is presented. It supports the belief that 'developed' teams are more efficient and effective deliverers of care than non-developed teams.

1775. GARCIA, D., GAINES, M. and LOWE, W. **Hospital devises department to expedite patient care review.** *Hospitals*, Chicago, 1977, May 16, vol. 51, no. 10, pp. 67-71.

In November 1975, Providence Medical Center, Seattle, Wash., decided to create a department of patient care review. Its areas of responsibility include utilization review, medical audit and discharge planning. The medical director is administrative head and the staff includes a registered nurse, a registered record administrator, and an accredited record technician. The functions of the staff and the procedures followed are outlined. The true impact of the new programme is difficult to evaluate, but it appears to be economic and effective and has been amazingly well accepted by the medical and other professional staff.

DISCHARGE OF PATIENTS

See Abstract Nos. 1724, 1779

HOME CARE, AFTER-CARE

1776. VALDEZ, N. **'After-care': report on a survey of the experiences and opinions of ex-inpatients in East Roding Health District (Research Report No. 2)** Ilford, East Roding Community Health Council, 1977, 63pp.

This survey provides information on the provision of after-care for older discharged hospital in-patients. The small number interviewed (58) indicates that the survey should be considered as a pilot study and not as a comprehensive and definitive statement regarding the problem. The researcher approached the survey using the premise that the pattern of health care is changing, becoming less hospital oriented and considering individual needs and interests of the patients to a greater extent. The patients were asked about their knowledge and experience of existing 'after-care' facilities; their expectations of services received; and how their expectations compared with their actual experience of the services provided as well as any gaps or omissions in services that they noticed. The survey attempted to direct attention to the efficiency of the after-care services in the East Roding District.

SPECIAL DEPARTMENTS

WARDS

See Abstract No. 1802

PHARMACY

1777. NEDERGAARD, M. **Health care and hospital pharmacy in Denmark.** *American Journal of Hospital Pharmacy*, Washington, 1977, June, vol. 34, no. 6, pp. 595-600.

The Danish health care system and pharmacy practice are discussed. Aspects include: education; community pharmacy practice; pharmaceutical manufacturing in pharmacy

practice; hospital pharmacy practice; drug distribution; drug information services; and drug product manufacturing by hospital pharmacies. Pharmacies manufacture 40 per cent of the drug products on the market. The number and location of community pharmacies are controlled by the state. A total of 90 pharmacists are employed in 13 hospital pharmacies; half the pharmacists are occupied in manufacturing drug products. Since hospital pharmacy in Denmark is only a minor aspect of pharmacy, Danish hospital pharmacists have always been concerned with the international world of hospital pharmacy.

1778. PERÄLÄ-SUOMINEN, A. **Health care and hospital pharmacy in Finland.** *American Journal of Hospital Pharmacy*, Washington, 1977, June, vol. 34, no. 6, pp. 600-603.

The Finnish health care services and pharmacy practices are discussed. Aspects covered include: education; the Social Insurance Institution of Finland; health care services; community pharmacy practice; hospital pharmacy practice; and future developments. The drug supply in Finnish hospitals is organized in one of three ways: hospital pharmacies have a chief pharmacist; central medicine supplies in hospitals without hospital pharmacists are under the supervision of the chief physician; and in smaller hospitals the caretaker is a nurse.

1779. DANIELS, C. E. and TANGREA, J. A. **Use of patient-oriented drug data sheets in counselling patients before discharge.** *Hospital Pharmacy*, Philadelphia, 1977, May, vol. 12, no. 5, pp. 230-232, 234-236, 241-242.

In many instances, patients of the Clinical Center of the National Institutes of Health, Bethesda, Md., are admitted several times over a period of years with extended intervals between visits. It is important therefore that before discharge each patient receives proper instruction regarding his drugs. This paper describes a study to develop an efficient system of pharmacist-conducted pre-discharge interviews. An information sheet (drug data sheet) was developed for each drug dispensed for the patient to keep on discharge. It included: drug name (generic and trade); principle uses; adverse effects which should be reported; non-prescription drugs which may interfere with treatment; miscellaneous information; and directions for use. A designated routine for pre-interview preparation was devised; this is outlined. The system was tested in the endocrinology unit of the National Heart Lung and Blood Institute. Interviews were conducted with 20 patients, 14 of whom returned a questionnaire. The patients thought the information sheet and interview to be of value; a problem of follow-up remained. The further integration of aspects of this service into a comprehensive counselling programme is planned, together with patient follow-up.

1780. SARGALSKI, P. J. **Uses of a Xerox 800 electronic typing system in an intravenous additive service.** *Hospital Pharmacy*, Philadelphia, 1977, June, vol. 12, no. 6, pp. 285-287.

The intravenous additive service at the 292-bed Baptist Hospital of Miami prepares about 4,000 units a month. A direct copy of the physician's order is received by the pharmacy. A single card Xerox 800 electronic typing system is used by a pharmacist or pharmacy technician to type the two magnetic cards used to generate each label: the care-label and the time-label cards. The care-label card contains patient-specific

information; it is automatically ejected after the stability time is printed out. The time-label card is inserted to actually finish the label. Profile cards are made and automatically priced per unit. Two permanent magnetic charge cards are used for this purpose. Monthly statistics are also recorded using the system.

1781. SIGELL, L. T. and others. **Past, present and future of drug information centers as catalysts for the utilization of drug therapy information.** *Drug Information Journal*, New Brunswick, 1977, Jan./March, vol. 11, no. 1, pp. 11-16.

There are probably at least 83 drug information centres of varying sizes in the United States which are used by physicians to a greater or lesser extent. A history of drug information centres and their activities is outlined. The Drug and Poison Information Center at the University of Cincinnati Medical Center provides a service which has grown from serving 400 people in 1966 to serving over 35,000, including non-medical users. It consists of a number of access mechanisms and centralized resource bases providing specific recommendations and advice on drug use. In answer to the criticism that most queries require limited expertise to answer, a study at this centre showed that 40 per cent of 3756 citations given were from 120 different sources. The placing of a centre in a major health services library means that the majority of queries can be dealt with by information officers rather than by medical staff. As to the future, the authors favour the development of local 'answer collation centres' providing answers from within local medical centres which are made generally available by a 'national answer retrieval service'. This service would publish an answer citation list and manage a computer centre linking local centres to centralized resource bases.

1782. MADDEN, M. and MACDONALD, A. **An evaluation and comparison of nine drug information retrieval services.** *Drug Information Journal*, New Brunswick, 1977, Jan./March, vol. 11, no. 1, pp. 47-59.

This evaluation and comparison of drug information retrieval systems aimed to facilitate a selection of systems to meet the needs of the Australian Department of Health. Smaller systems were also reviewed to help information centres in individual states. The information systems evaluated were: (i) Medlars; (ii) Excerpta Medica Drugdoc (EMD); (iii) Ringdoc; (iv) Toxline; (v) De Haen Drugs in Use; (vi) Iowa Drug Information System; (vii) Adis; (viii) Index Medicus; and (ix) Drug Literature Index (DLI). All citations on 10 selected drugs, some new and some well tried, which had been added to each system between January 1974 and May 1975 were retrieved. The systems were compared quantitatively for all drugs and qualitatively for three of them, and comparisons made between similar systems, for example, EMD and Medlars and Index Medicus and DLI their manual counterparts. EMD retrieved about twice as many references as Medlars and was faster in entering the information into the system, but Medlars gave more information on adverse drug reactions. The two should, therefore, be used together, whether in their computerized or manual forms. Of the smaller systems, Iowa gave the best coverage, but Adis, while giving fewer references, was very up-to-date. Detailed results are given in three figures and nine tables.

1783. FORD, D. R., RIVERS, N. P. and WOOD, G. C. **A computerized detection system for potentially significant adverse drug-drug interactions.** *Journal of the American Pharmaceutical Association*, Washington, 1977, June, vol. NS17, no. 6, pp. 354-357.

A computerized drug-drug interaction study was carried out over a 43-day period in a

non-formulary, non-teaching hospital in Memphis, Tenn. The objectives of the study were: (i) to establish a method of screening for drug-drug interactions using computer systems; (ii) to determine the number and type of potential drug-drug interactions; (iii) to determine the clinical significance of drug-drug interactions relative to the patient's disease state; and (iv) to determine the average amount of time required per patient to monitor for clinical relevance in the assessed potential drug-drug interactions. All patients were screened daily for drug-drug interactions and out of a total of 1,004 patients, 140 potential interactions were found in 77 patients. Seven clinically relevant interactions took place, and digitalis and warfarin were implicated in the majority of cases. The results indicate that such interactions may occur more frequently than previously reported in other studies.

1784. PANG, F. J. **Developing an effective institutional compliance program for inventories and records of controlled substances.** *Hospital Pharmacy*, Philadelphia, 1977, May, vol. 12, no. 5, pp. 220-221, 223-224, 258.

Recent investigations at Porter Memorial Hospital, Denver, Colo., by Drug Enforcement Administration inspectors of the controlling system of all scheduled substances revealed violations of certain policies and procedures relating to inventories and record keeping methods as well as out-patient and in-patient dispensing. This paper describes the revised policies and procedures introduced to meet legal requirements. All records of controlled substances are kept in the pharmacy, thus the pharmacy can provide readily retrievable records of the receiving, dispensing and administering of all scheduled substances in accordance with the law. For in-patient dispensing, three experiments were recommended to evaluate and determine the types of control that will most efficiently comply with the law, be lowest in cost and assure a greater degree of patient safety: (i) using the pharmacy profile card and nursing medication administration records system; (ii) using the proof-of-use system; and (iii) using the nurse-controlled medication system. The third system was adopted because it offered the best accountability of controlled substances for in-patient dispensing and administration. The hospital may be the first in the area to maintain complete and accurate records, with the receipt and distribution of all controlled substances in accordance with the laws and regulations. To achieve this degree of control, 5.5 additional full-time equivalent employees had to be added to the staff; this does not contribute to better patient care or better service.

1785. KNOBEN, J. E. **The role of drug information in PSRO review.** *Drug Information Journal*, New Brunswick, 1977, Jan./March, vol. 11, no. 1, pp. 43-46.

The Professional Standards Review Organization (PSRO) ensures the quality of medical care in the United States. Its involvement with drug therapy occurs most frequently in connection with medical care evaluations (MCE's), studies which assess the quality and use of health care services. When a MCE study on drug use is set up in an institution, drug information is needed both prior to, and during the course of, the study. Health education programmes which are held to rectify a deficiency discovered by an MCE, also need to be supported by adequate drug information resources. The Department of Health, Education and Welfare has also set up continuing and formalized drug use reviews to supplement PSRO studies which are limited both in time and scope. Much detailed drug information is needed for this programme.

1786. ELLENOR, G. L. and FRISK, P. A. **Pharmacist impact on drug use in an institution for the mentally retarded.** *American Journal of Hospital Pharmacy*, Washington, 1977, June, vol. 34, no. 6, pp. 604-608.

The involvement of the pharmacist in a team approach for monitoring the care of the mentally handicapped in an Idaho hospital is discussed. The pharmacist reviewed the patients' charts and pharmacy records to compile a complete drug history. He also visited the patient to determine current problems, the effectiveness of the treatment and possible adverse drug reactions. Recommendations were made to the behavioural review committee. During the two-year study period the use of anti-psychotic drugs was reduced by 18 per cent, and the total net savings in drug expenditure was more than $10,000 per year. The study shows that the pharmacist, through a team approach, can help reduce the over-use of drugs in institutions for the mentally handicapped.

1787. BARTHOLD, D. and NYGREN, C. **A new dispenser to aid drug administration.** *Hospital Pharmacy*, Philadelphia, 1977, June, vol. 12, no. 6, pp. 301-302, 304.

The Mediset drug dispenser (which originated in Sweden where it is called Dosett) is a plastic box with 28 compartments (four rows of seven) which enables the pharmacist, physician, nurse or patient to lay out one week's daily drug intake. The days of the week and the dosage hours are indicated both in ordinary letters and in Braille for the blind or those with dim vision. On the back of the box is a card on which a record of the different drugs prescribed can be made. Use of Mediset in paediatrics, medicine and surgery, geriatrics and the care of the mentally handicapped is reviewed.

LABORATORIES

1788. FREW, I. D. O., ROOME, T. W. and ASHMAN, B. **West Midlands regional control scheme for haematology.** *Journal of Clinical Pathology*, London, 1977, July, vol. 30, no. 7, pp. 641-644.

A scheme for inter-laboratory quality control was devised in May 1974 for six laboratories in the Birmingham area. The number of participating laboratories has since increased to 30 which constitutes the majority of haematology laboratories in the West Midlands Region. Details of the organization and preparation of the material are presented. Trials are held on a fortnightly basis and statistical data are returned within 24 hours of testing the issued sample. A quality control scheme for haematology of the type described offers a more immediate form of inter-laboratory control for a fairly large group of laboratories. Enough data is produced to be statistically viable, yet the grouping is small enough to nullify most problems caused by delay in sending specimens and receiving reports.

1789. RUTTER, D. A. **Safety cabinet for use in laboratory studies on hazardous infectious diseases.** *British Medical Journal*, London, 1977, July 2, vol. ii, p. 24.

The safest procedure for handling dangerously infectious specimens is to contain all such material at all times within a safety cabinet. Even laboratories that would rely on heat inactivation need a cabinet for bacteriology, haematology, and the separation of plasma and serum. This paper describes a slightly larger cabinet that accommodates the

few additional instruments necessary for most common clinical biochemical measurements. The cabinet is an aseptic type and consists of a welded aluminium box about 200 × 90 × 60 cm. with an extension at one end for the microscope. At the other end is a gas-tight door and a liquid disinfectant-filled lock (dunk tank) through which sealed containers may be passed. The windows are of 6 mm. Perspex. A spark-proof fan draws about 5.7 m^3 (200 cubic feet) of air per minute through the cabinet, giving about 440 air changes an hour. The inlet and outlet air is filtered through absolute glass fibre paper filters that prevent the escape of infectious particles even at low airflows, so that in the event of a power or fan failure the cabinet remains sealed. No leaks were detected with the fan either on or off when tested with a tracer organism. A photograph of the cabinet is included.

1790. STEEL, B. W. and others. **Evaluation of clinical chemistry laboratory performance in twenty Veterans Administration hospitals.** *American Journal of Clinical Pathology*, Philadelphia, 1977, June, vol. 67, no. 6, pp. 594-602.

An evaluation of clinical chemistry laboratory performances of 20 Veterans Administration hospital laboratories was carried out. Ten of the laboratories had been classified as 'superior' on the basis of previous College of American Pathologists surveys, and 10 others were randomly selected. The methods of analysis and the materials used were outlined. Several aspects of proficiency surveys were studied including: use of masked versus unmasked sui vey specimens, methods of ranking and comparison of medically useful performance criteria. In general the results indicated that laboratories were performing at the level of the state of the art and realistically met the criteria for medical needs for most routine tests. There was no difference between results obtained with masked and unmasked specimens. The 10 'superior' laboratories showed slightly greater precision than the others but were not more accurate, and two of them performed very poorly. The limitations in the concept of ranking laboratory performance by survey results are outlined, and the use of the standard deviation index squared and the chi-squared test is a more valid approach.

BLOOD TRANSFUSION DEPARTMENT

See also Abstract No. 1788

1791. JENSEN, V. E. Transportabelt blodbankkøleskab. [**A transportable blood-bank refrigerated container.**] *Tidsskrift for danske Sygehuse*, København, 1977, April, vol. 53, no. 4, pp. 59-60.

It is 180 metres from the blood bank at Hjörring Hospital to the operating theatre, with two changes of lift, so the hospital engineer was asked to design a transportable refrigerator. The vehicle was built on the basis of an SAG model HF 9270 K freezer, minus all its automatic controls. A stainless steel plate mounted above the base permits the circulation of air, and the internal fan switches off when the lid is opened. The internal temperature is regulated by Danfoss thermostats, and there is a 6 V power failure and temperature change alarm buzzer. The internal temperature is continually recorded on a clockwork thermograph. The Fenwal bags of blood are transported in stainless freezer baskets; there is room for 66 in all. The box is filled in the morning with the blood requisitioned by the theatre. The porter disconnects it from the mains, runs it

to theatre, and connects it to the mains again. It is run back empty at night for refilling next morning. The article is illustrated with an exterior and an interior photograph of the vehicle.

DIAGNOSTIC X-RAY DEPARTMENT

1792. BETZ, F. **Dimensioning of X-ray diagnostic departments in university hospitals.** *Electromedica*, Erlangen, 1977, no. 2, pp. 45-49.

The first step in planning a diagnostic X-ray department is to decide its dimensions. This paper discusses the particular problems this presents in teaching hospitals. As frequently no useful figures are available, the planner has to rely on generally accepted standards. Out-patients normally account for 50 per cent of examinations. At this level 2.4 X-ray rooms are required per 100 beds; as the proportion of out-patient examinations rises the number of rooms needed increases and may result in 5.7 rooms per 100 beds when out-patients represent 80 per cent of examinations. Special procedures account for 18 per cent of all examinations and 40 per cent of total examination time. A matrix suggests the primary use of the X-ray rooms of various sizes of department. Special procedures require more space than routine examinations; this influences the total space requirements. Adequate space is also required for teaching and research functions. The average dimensions per X-ray room depend to some extent on the total number of rooms. Space proportions for the various areas are suggested. The effects of technical innovations are discussed. It is shown that the inevitable increase in gross area with the number of X-ray rooms is not strictly linear. Plans and diagrams are included.

1793. CARTER, P. H. **A new look at radiography training.** *Radiography*, London, 1977, July, vol. 43, no. 511, pp. 144-148.

The efficiency of training in diagnostic radiography is examined and three main problems are identified: (i) poor correlation between students' practical and theoretical training, especially during the early part of the course; (ii) failure of the Part I studies to provide an effective foundation for the learning of Part II subjects; and (iii) lack of a firm incentive for students to think about and understand their work, rather than merely to remember facts and procedures. The main solution lies simply in matching the systems of both theoretical training and examination to the learning pattern which student radiographers naturally follow. A single change guided by this principle might bring solutions to the three problems: (i) with planned integration it would be difficult for theory and practice to establish themselves separately in the students' minds; (ii) the foundations for the later part of the course would be formed by the more elementary parts of the same subjects; (iii) the applications of theory to practice would be learned and could be tested throughout the course. The new course would also be a potential source of improvement in the training of theory radiographers. A specimen three-year programme of training is included as an appendix.

RADIOISOTOPE DEPARTMENT

1794. TRNAVSKY, G. Grundsätzliche Gedanken über Rehabilitation. **[Fundamental thoughts on rehabilitation.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1977, June, vol. 18, no. 6, pp. 348-353.

Rehabilitation is here defined as 'the sum of measures and activities which aim at as

complete a restoration as possible, by all available means, of the physical and mental capacity of the patient'. A general survey of rehabilitation services in Austria is presented under the following heads: medical rehabilitation centres; hospitals for vocational rehabilitation; vocational centres for the handicapped (for adults and for young people); educational centres for the handicapped (including special schools and continuation schools); workshops for the handicapped; and homes for the handicapped.

PHYSIOTHERAPY DEPARTMENT

1795. LLOYD, H. A. and FRASER, M. D. E. **The information needs of physiotherapists in the Atlantic Provinces with suggested physiotherapy working collections for small hospitals.** (Occasional Paper No. 13) Halifax, N.S., Dalhousie University Libraries, Dalhousie University School of Library Service, 1977, iii, 39pp. $2.50

The information needs of physiotherapists in the Atlantic Provinces of Canada are discussed. Although small community hospitals cannot be expected to develop large collections for physiotherapists, their physiotherapists have a responsibility to assist with the development and maintenance of a working collection of print and audio-visual materials. An outline is presented of physiotherapist's interest in the basic sciences, medicine and its specialties. A suggested physiotherapy working collection for small hospitals is presented, listing books, journals and information sources.

INTENSIVE CARE UNITS

1796. BURRELL, Z. L. and BURRELL, L. O. **Critical care.** 3rd edition. St. Louis, Mosby, 1977, xii, 427pp. £9.60

This third edition aims to present clearly information for all practitioners involved in caring for critically ill patients. Aspects covered include: cardiovascular disease; respiratory disease; central nervous system disease; gastrointestinal disease; renal disease; endrocrine disorders; obstetric complications; poisonings; burns; shock; and equipment and drugs. A bibliography of over eighty items is included, together with a glossary of terms.

1797. HILL, J. D., HOLDSTOCK, G. and HAMPTON, J. R. **Comparison of mortality of patients with heart attacks admitted to a coronary care unit and an ordinary medical ward.** *British Medical Journal*, London, 1977, July 9, vol. ii, pp. 81-83.

During a 32-month period 2,047 patients suspected of having heart attacks were admitted to hospital in Nottingham, 1,315 to a coronary care unit (CCU) and 732 to a medical ward. Out of 1,480 patients found to have definite or probable myocardial infarction, 438 had been admitted to an ordinary medical ward because of the shortage of beds in the CCU. More patients aged over 65 had been admitted to a ward than to a CCU and more patients aged 65 or less had been admitted initially to a CCU. Within each age group patients admitted to a CCU were clinically similar to those admitted to a ward. There was a higher number of successful resuscitations among patients admitted to a CCU, but there was no difference in mortality in either age group between patients admitted to a CCU and a ward.

SPECIAL HOSPITALS AND UNITS

OUT-PATIENT

See also Abstract Nos. 1728, 1811

1798. BERMAN, R. A. and MOLONEY, T. W. **Where does real fiscal control of the outpatient department lie?** *Hospitals*, Chicago, 1977, May 16, vol. 51, no. 10, pp. 99-100, 104, 106, 107.

During 1974, New York Hospital-Cornell Medical Center established a division within its ambulatory care department to study the problems of ambulatory care and to develop strategies for solving them. This paper is a discussion of those findings that deal specifically with financial and management issues of out-patient clinics. To regard out-patient departments as independent fiscal and functional units is a misconception; they are, rather, cross-sections of the actual functioning divisions of hospitals. This misconception has misdirected attempts at resolving the problem of financial deficits. An examination of who controls expenses and revenue reveals that it is the natural functional divisions of the hospital, particularly the major clinical departments, rather than the out-patient department itself. Each major clinical department is, in most respects, an independent unit. It is necessary therefore to increase the management responsibility and potential of these departments. One of the functions of the overall director of out-patient services would then be to negotiate with the clinical department chairman, from an equal organizational status and on behalf of the individual clinics, for both a larger share in the department's resources and for staff compliance in actually providing these resources. Under this type of organization, more analysis would focus on the proper entities, and costs and revenues could be examined and controlled at their inception.

CASUALTY AND ACCIDENT

See also Abstract Nos. 1766, 1810

1799. WILLEMAIN, T. R. **A coverage model of emergency facility categorization.** *Journal of the American College of Emergency Physicians*, Lansing, 1977, March, vol. 6, no. 3, pp. 89-93.

Categorization of emergency facilities on a regional basis could greatly improve planning of emergency services. The literature on categorization tends to obscure the fundamental trade-off of cost and effectiveness and ignore the spatial and public access dimensions of the problem. A mathematical model is used to provide a formal treatment of the categorization issue that would account for the spatial, economic, clinical and public access features of the problem. By rationalising the choice between 'stabilization facilities' and 'definitive care facilities' for each type of emergency, by introducing the concepts of 'coverage' and 'coverage per dollar', and characterizing the relative cost and effectiveness of stabilization facilities, the interrelationships between the variables can be demonstrated. The criteria depend upon the overall spatial density of facilities and the method of access. The categorization of many facilities into a stabilization role is

hard to justify when there are few facilities and when patients enter the system at the nearest facility.

1800. GURFIELD, R. M. **Expected medical emergencies: an index of need for a region.** *Journal of the American College of Emergency Physicians*, Lansing, 1977, March, vol. 6, no. 3, pp. 94-99.

The need for emergency medical services is estimated according to the number of incidents giving rise to serious injuries. Most investigators have concentrated on various aspects of the problem, usually considering ambulance calls or visits to the emergency departments. The resources allocated to emergency services should reflect the estimated number of serious injuries. However, the distribution of these resources also depends upon the economic size of the departments and the location of the incidents. A cost benefit analysis shows that certain rural areas in the United States with high emergency rates should have 50 per cent more resources than their population alone indicates.

DAY HOSPITALS

See also Abstract No. 1809

1801. MCDONNELL, D. **An evaluation of day centre care.** *International Journal of Social Psychiatry*, London, 1977, vol. 23, no. 2, pp. 110-119.

St. Gabriel's Day Centre opened in July 1970 as part of the developing mental health services of the Dublin North Central catchment area. Its objects are to provide: (i) care in a community setting for patients who would otherwise have to be admitted to hospital; (ii) nurses and other care staff with the opportunity of participating in a therapeutic community setting; (iii) a teaching unit; and (iv) support and social facilities for older patients. This paper reports a survey to analyse the functioning of the centre and to evaluate its programme. There were 95 males and 160 females in the sample. The analysis, presented in seven tables, covers: referral sources; sex, occupation and diagnosis; age, marital status and occupation; health status; household problems; treatment programme; and duration of attendance cross tabulated with diagnosis. The programme was evaluated by assessing improvement in a number of items: relief of symptoms; hospital admissions; medication and out-patient department consultations; psychiatric social worker or community nurse management; day centre contact; improvement rating; and symptoms cross tabulation against diagnosis. There was an average improvement on follow-up of 50 to 55 per cent. The advantages of day care in the community setting are discussed.

INFECTIOUS DISEASES AND ISOLATION

See Abstract No. 1789

CHILDREN

See also Abstract Nos. 1757, 1769

1802. CLEARY, J. **The distribution of nursing attention in a children's ward.** *Nursing Times*, London, 1977, July 14, vol. 73, no. 28, occasional paper, pp. 93-96.

A research project designed to record the effect of the appointment of a playleader to a children's ward, also threw light on the nursing aspects of ward life. Observations were made in the ward for three four-week periods, daily from 0600 until at least 2300 seven days a week. The results show how nursing attention was distributed over time and give examples of the way this distribution affected individual children and events. Shortcomings are attributed largely to the use of task assignment as a style of work organization which is considered to be unsuited to both the physical and emotional facets of the nursing care of children. The implications of the findings are discussed.

GERIATRICS AND LONG-STAY

See also Abstract No. 1700

1803. BAGNALL, W. E. and others. **Geriatric medicine in Hull: a comprehensive service.** *British Medical Journal*, London, 1977, July 9, vol. ii, pp. 102-104.

A partially age-related admission policy coupled with a 'single-ward' scheme of treatment and rehabilitation was introduced by the geriatric department of Kingston General Hospital, Hull, in 1970. All medical emergencies aged 75 and over are directly admitted together with those patients of 74 and below whose circumstances made it likely that they would benefit from first treatment in the department. The proportion of the retired population admitted by the general physicians has been reduced. The proportion of in-patients needing continuing care has been reduced to less than 20 per cent. The mean length of in-patient stay has fallen to under 30 days and separate long-stay wards are no longer needed. More than 91 per cent of patients are admitted without domiciliary assessment, and only five to six per cent of admissions are transferred from other units.

1804. SALLING, A.-L. Reportage fra Bystaevneparken i København: selvständige hjem drager fordel af fälles faciliteter. **[A report on the Bystaevnepark, Copenhagen: seven independent old people's homes enjoy the advantages of communal facilities.]** *Sygeplejersken*, København, 1977, May 25, no. 20, pp. 4-8, 25.

The old people's homes facilities for central Copenhagen occupy a 25-acre site (Town Moot Park) in Brönshöj, where some 800 inmates live in seven identical blocks—distinguished only by the species of tree outside—each comprising a 53-person nursing unit and protected accommodation for 36 or 76 persons. Each Home, under its individual Matron, has a communal dining hall, ergotherapy department, gym, hairdressers' and chiropodist, whilst common to all seven blocks are central kitchens, laundry, boiler-room, physiotherapy department, dentist, specialists' clinic, cafeteria, shops, bank and staff crêche. Entertainments, outings etc. are also common to all blocks. A protected flat comprises a 25 m^2 apartment with a living room, kitchen and bathroom: all rooms are accessible to wheelchairs. The flat is cleaned once a week, and clothes and linen are laundered once a fortnight. The rent is 15% of the pension or other income, to a maximum of d.kr. 2,000 (£200) a month, which is the actual cost of running a flat. In the nursing department an inmate has a 15 m^2 flat with bathroom,

furnished with a bed, staff call system, carpets and curtains: all other furniture is the patient's own. The majority of the inmates are women; only a third are under 80. The staff consists of nurses, nursing home assistants, nursing auxiliaries (trained and untrained) and nursing home auxiliaries under the seven matrons and supervisory doctors. The main problem appears to be loss of individual identity among the older nursing cases, despite efforts by the staff to the contrary. The article is illustrated by two exterior and ten interior photographs.

1805. SALLING, A.-L. Reportage fra plejehjemmet Marienlund I Odense: det hjemlige miljø er baseret på personalets trivsel. **[A report on the Marienlund home (for the aged) in Odense: happy staff form the basis for its pleasant environment.]** *Sygeplejersken*, København, 1977, May 4, no. 17, pp. 4-7.

The 54-place Marienlund Old People's Nursing Home (architect: H. J. Jensen) was opened in July 1976. There are two wards, with single rooms for 44 inmates and married quarters for five married couples. In addition, there are 34 day-care patients. Odense City Council makes efforts to enable citizens to retain their own homes as long as possible. Admissions to nursing homes are on the recommendation of a medical team, which means that the patients admitted are geriatric cases (80 to 95 years old) requiring a great deal of care. As in all other old people's homes, there is a tendency to deprive the inmates of control over their daily life, but this is diminishing—despite the difficulty of treating nice but confused, senile and exhausted people as equals. Each ward is staffed by a sister, a nurse, five nursing auxiliaries and a porter; and there are in addition an ergotherapist, two occupational therapeutic auxiliaries and a half-time physiotherapist. The matron arranges weekly staff discussions to ensure unity of policy and elimination of points of difficulty. The article is illustrated with one exterior and nine interior photographs.

1806. LAWSON, J. S. and SCARR, K. **Development of a statewide geriatric service—an evolutionary approach from Tasmania.** *Australian Hospital*, Prahran, 1977, July, no. 10, pp. 10-11.

When a review of geriatric services in Tasmania was carried out in 1970, considerable numbers of nursing home beds and several day hospitals and home care services had already been established. However a number of shortcomings were found. As a result, four concepts were developed which were designed to overcome the problems and meet the objectives for a comprehensive service. These concepts were: (i) development of criteria against which performance or provision of services could be specifically measured; (ii) the use of general hospitals to back up and actually provide resources to develop programmes; (iii) the development of formal assessment and rehabilitation centres for all patients before permanent placement in a nursing home; and (iv) state authorities should plan the future provision of facilities in conjunction with the appropriate federal authorities.

1807. BREINDAHL, M. Plejehjemsassistent-uddannelsen—en selvständig uddannelse: en personalegruppe der er behov for til pleje og omsorg. **[Nursing home assistant training is an independent course: this is a category of staff which is essential for the nursing and care of the elderly and the handicapped.]** *Sygeplejersken*, København, 1977, May 25, no. 20, pp. 12-13.

The April number of *Sygeplejersken* carried two articles questioning the need for

nursing home assistants, pointing out that nurses and nursing auxiliaries could do the work quite satisfactorily and claiming that nursing home assistant training was superfluous. The author, principal of the Ministry of the Interior's nursing home assistant training school, agrees with this viewpoint *only* if one regards such assistants as unnecessary nurses' aides, but claims that their training is essential. The training course aims at preparing trainees to nurse and care for old people and long-term care patients in nursing homes and similar institutions. It also covers older, handicapped patients' general problems: the family, the financial situation, the home, etc. The course is divided into three sections: the hospital section, comprising a 10-week theory course and 13 weeks each on a long-term medical ward and a department of orthopaedic surgery; a nursing home section, comprising 13 weeks' theory and 13 weeks each in a general nursing home and a psychiatric nursing home; and a care of the handicapped section, comprising 10 weeks' theory, five weeks' individual practice (including at least a week in a local authority Social Affairs office), and eight weeks' final theory. Entrance to the final exam is conditional upon satisfactory progress reports from tutors on the course. Similar courses are also offered by the two religious institutions Aarhus and Filadelfia Deaconesses Colleges.

1808. SULLIVAN, M. Z. and MISTRO, D. del. **The effects of nursing home size and food on elderly residents.** *Hospital Administration in Canada*, Don Mills, 1977, June, vol. 19, no. 6, pp. 39, 44, 46, 48, 52.

A study was undertaken to evaluate the nutritional quality of food in two Toronto nursing homes (one with 155 beds, the other with 45). Attempts were made to assess the importance of food to the residents and to ascertain whether the environmental quality of the homes differed and if so in what respect. The findings included: (i) the vitamin and mineral values compared favourably with the recommended allowances, but protein and calories exceeded the recommended intakes considerably, the calorie excess being greater in the smaller home; (ii) no significant correlation was found between liking the food and psychological state, although there was a significance when liking the food was controlled by the four psychological parameters studies; and (iii) satisfaction with place of residence. Data obtained in this study suggest that food does not have such an importance in satisfaction with institutional living as some writers have suggested. The data do point to the occurrence of a happier group of people in the smaller home. The implications of these findings are discussed briefly.

1809. GOOCH, L. A. and LUXTON, D. E. A. **A new geriatric day hospital.** *Nursing Mirror*, Sutton, 1977, July 21, vol. 145, no. 3, pp. 36-38.

The geriatric day hospital at Ely, opened in January 1976, is a purpose-built, single-storeyed building, with an open-plan kitchen and day area. A patient may be referred by his general practitioner, attend after discharge from hospital, or may still be an in-patient. Most patients attend two or three days a week, generally for occupational therapy in the morning and physiotherapy in the afternoon. Occupational therapy includes help with tasks of daily living, together with activities such as woodwork and gardening. The physiotherapist provides tuition in the use of mobility aids, as well as exercises. A health visitor liaises with the social services to provide help at home. Reasons for attendance include: (i) musculoskeletal complaints; (ii) stroke illness;

(iii) various combinations of stroke, dementia and cardiac failure; and (iv) social problems. The unavailability of transport and innapropriate requests for attendance can lead to problems, but in general the day hospital is seen as a valuable aid in avoiding long-stay in-patient care.

CARDIOLOGY

See Abstract No. 1797

SURGERY

1810. FRIES, B. E., GUTKIN, C. E. and GINSBERG, A. S. **Emergency room utilization: data reconstruction using a deterministic simulation model.** *Computers and Biomedical Research*, London, 1977, April, vol. 10, no. 2, pp. 153-163.

A study of the organization of the surgical emergency facility of Presbyterian Hospital, New York City, required the analysis of the use made of treatment rooms and patient flow. The method of collecting data is described. Observers recorded patient flow, treatment times and delay times for 701 patients over a seven day period. A SIMSCRIPT computer program was written to simulate the organization of the clinic in order to reconstruct specialized and general treatment room use. The program collected statistics using the macrostatistical data analysis routines of the language. The method allows further evaluation, by stochastic or deterministic simulation, of alternate patient flows, facility configurations and operational policies for the health facility.

1811. SMITH, A. M. **Why you may need an ambulatory surgical center.** *Hospital Topics*, Sarasota, 1977, May/June, vol. 55, no. 3, pp. 28, 30, 33-34.

Scottsdale (Ariz.) Memorial Hospital opened one of the first free-standing, hospital-owned out-patient surgical centres in the United States in October 1971. This paper shows how the centre provided relief to hospital in-patient facilities, increased the total amount of surgery performed, reduced the cost of surgery for patients (by a total of two million dollars in four years), and provided a more personalized service in a safer environment. The prerequisites for the establishment of an ambulatory surgical centre are outlined and the advantages of such a centre over emergency departments as the setting for minor surgical procedures are discussed.

MATERNITY

1812. JAMES, D. K. **Patients transferred in labour from general-practitioner maternity units.** *Journal of the Royal College of General Practitioners*, London, 1977, July, vol. 27, no. 108, pp. 414-418.

The role of the general practitioner in obstetrics has changed markedly during the past decade with virtually all mothers now being delivered in hospital either in consultant or general practitioner maternity units. A total of 201 patients transferred in

labour from general-practitioner maternity units to the consultant unit at the Royal Berkshire Hospital, Reading, were analyzed. Various methods of reducing such transfers at a critical stage in pregnancy are discussed.

1813. RICHMOND, G. A. **An analysis of 3,199 patients booked for delivery in general-practitioner obstetric units.** *Journal of the Royal College of General Practitioners*, London, 1977, July, vol. 27, no. 180, pp. 406-413.

The outcome of 3,199 women booked for delivery in six general practitioner obstetric units in Derbyshire was analyzed. The units varied in size from Ashbourne in rural Derbyshire (10 beds) to the Nightingale Hospital in Derby (34 beds). The results indicated that altogether 159 women (five per cent) cancelled their bookings, 26 per cent were transferred to a consultant unit after referral for routine problems of pregnancy and 14 per cent were transferred for problems arising in labour. One per cent were transferred after confinement. Fifty-four per cent were delivered successfully in the general practitioner units. The perinatal mortality of all women initially booked for a general practitioner unit who delivered was 15.9. The perinatal mortality of the 1,795 births in the six general practitioner obstetric unit was 3.9.

1814. THORUP, H. and GULDAGER, E. Forskning inden for vigtigt men forsømt område. **[Research in an important but neglected field.]** *Sygeplejersken*, København, 1977, April 27, no. 16, pp. 16-19.

Two nurses, who had previously read some psychology and sociology at University, got a grant to conduct a comparative study of maternity wards in two Danish hospitals, and have since published their report under the title of 'Barselsdage' (Lying-In). Their aims were to describe and analyse the principles and practice of nursing on the two wards, and make proposals for modifications where necessary. After obtaining the consent of the relevant consultants, they described their intentions to the ward staffs concerned. One of the methods employed was direct observation: 8 days, 8 evenings and 1 night on each of the two wards. Notes were taken on the basis of the model described in Straers' 'Field Research'. Staffs were then interviewed by occupational group, the results of the interviews subsequently being recorded by Dictaphone from the notes. Ten randomly selected families were then interviewed within a fortnight of the mother's discharge from the two wards, the two hours' notes being recorded by Dictaphone after each interview. The seven chapters in the report are entitled: (i) child with the mother or in a separate room; (ii) breast-feeding/bottle-feeding; (iii) advice; (iv) staff relationships with each other and with mothers and family; (v) visiting hours; (vi) report; and (vii) the ward's aims. On this basis it was possible to describe the main characteristics of the two wards.

PSYCHIATRY

See also Abstract Nos. 1713, 1786, 1801

1815. FULLER, T. K. **Social factors and mental hospitalization.** *Social Work*, New York, 1977, March, vol. 22, no. 2, pp. 151-153.

The rates of admission to hospital of psychiatric patients in each state in the United States are examined in relation to four demographic variables (and changes in those

variables): median income; percentage of population reported as black; percentage of the population aged 65 or older; and percentage of the population classified as rural. The results suggest that there are significant systemic relationships between major demographic trends in the United States and the rate of admission to psychiatric facilities. One significant implication of these findings is that macrosocial trends and changes can have important impacts on social work practice, and the analysis of these impacts can make an important contribution to social policy and social work programme planning.

1816. ROSSON, B. **Role expectations and behaviors in a group home program.** *Hospital & Community Psychiatry*, Washington, 1977, April, vol. 28, no. 4, pp. 277-280.

Patients and staff in a group home scheme operated by the Veterans Administration Hospital in Topeka, Kansas, were interviewed to determine their ideas of acceptable behaviour and how the groups functioned. The results showed that the behaviour accepted by group members differed considerably from staff expectations which were that: (i) group members should be clean and well dressed; (ii) group homes should resemble normal households; (iii) group members should participate in a productive activity; (iv) some types of behaviour should be discouraged; (v) drug therapy was essential; and (vi) group members should care for each other and make decisions democratically. Members, however, were unaware of a lack of hygiene, considered they got on well together and regarded fighting as the only deviant behaviour. They found decision-making difficult, but in general enjoyed activities and took pride in doing household tasks. The staff were tolerant of some deviation from their standards, and only when such deviations were considerable were group members returned to hospital.

1817. SAMUEL, R. **The Worcester Development Project: development of psychiatric services in Kidderminster HD.** *Nursing Times*, London, 1977, July 14, vol. 73, no. 28, pp. 1067-1069.

As part of the Worcester Development Project, the Kidderminster Health District has an ideal opportunity of pioneering, testing and evaluating the proposed psychiatric services of the future as set out in *Better services for the mentally ill*. Three facilities are described in this paper: the new psychiatric department of Kidderminster district general hospital; Franche Rehabilitation Hostel; and Kidderminster day centre. The psychiatric department, which is expected to be operational in October 1977, will have two 30-bed wards, each containing five five-bed areas, three with cubicles which offer the maximum amount of privacy to the patient, and five single rooms. It also has 80 places for day patients. The day hospital will be the main activity area for the whole department, with a general occupational therapy area, workshop, kitchen, music room, dressmaking, clerical, relaxation, arts and crafts and group therapy rooms, and large central dining area. Nursery facilities are provided for mothers who are in-patients or day patients. The hostel, opened in July 1976, provides places for 12 residents for up to one year. The purpose-built day centre, to be built shortly, will accommodate 60 people daily. Some problem areas are discussed.

1818. NIELSEN, J. and NIELSEN, J. A. **Eighteen years of community psychiatric service in the Island of Samsø.** *British Journal of Psychiatry*, London, 1977, July, vol. 131, pp. 41-48.

A study was carried out of patients aged 15 + referred to the community psychiatric service in a Danish rural population during a period of 18 years. The majority of the patients were referred to the clinic by the general practitioners. The mean referral rate was 17.9 per 1,000. Only 11 per cent of all referrals were admitted to a psychiatric hospital. The admission rate for psychoses was only 19 per cent and it was estimated that it would have been 44 per cent higher, if the service had been of the usual hospital-oriented type. The psychiatrist visited 43 per cent of the patients in their home at least once and 42 per cent of all 6,000 consultations were home visits. It was considered that approximately 50 per cent of all patients referred could be treated by the local physicians after examination by psychiatrists and discussion of the cases with them.

1819. BARKER, C. **A community psychiatric service.** *Nursing Times*, London, 1977, July 14, vol. 73, no. 28, pp. 1075-1079.

Development of a community psychiatric service based on Powick Hospital began in 1969. As the service developed it was necessary to identify the organization of patient care and the role of the community psychiatric nurse. In order to do this a two-year research project was undertaken; this paper is based on the results of the various areas of research. The data collected on a questionnaire on patient care was used to produce a phased system of care: intensive; supportive; and follow-up. Flexibility in the method of referral has proved to be essential if the patient is to receive a speedy follow-up service. By processing the data associated with 'nursing functions', four major areas in the role of the community psychiatric nurse emerged; nurse assessor, nurse consultant, nurse therapist, and nurse clinician. At present eight community psychiatric nurses are in post working for four consultants within the service.

1820. GILLARD, R. E. **The Worcester Development Project: Newtown Hospital** *Nursing Times*, London, 1977, July 14, vol. 73, no. 28, pp. 1074-1075.

Psychiatric in-patient and day patient facilities for the Worcester Health District are being built, together with the geriatric department, as phase one of Newtown Hospital, the new district general hospital. The two-storey psychiatric department consists of two blocks, one containing four ward units, and the other the day hospital, offices, patients' central dining area and one ward. The two blocks are joined by a connecting corridor, off which are two suites of three consulting rooms on each floor and the single bed passenger lift. Each 30-bed ward has been designed for maximum flexibility in use. Initially, three will be used as acute wards, each serving as a base for a clinical team serving a geographical division of the catchment area, and two will be for the elderly severely mentally ill. The day hospital, on the ground floor, can accommodate 160 patients, most of whom will be in-patients. It will be supported by 20-place day hospitals at both Evesham and Malvern.

1821. MORRIS, L. N. **Changing care pattern—Powick Hospital 1852-1977.** *Nursing Times*, London, 1977, July 14, vol. 73, no. 28, pp. 1069-1071.

Powick Hospital was built in 1852 and its appearance, size and location are typical of

that era. This paper outlines some of the changes which have taken place in the intervening years, with particular reference to patient care, treatment and staffing.

1822. ORLEANS, P. **The physical environment of the mentally handicapped. Personal space: architectural modification in an institution for the mentally retarded.** *British Journal of Mental Subnormality*, Birmingham, 1977, June, vol. 23, no. 44, pp. 36-42.

The Division for Developmental Disabilities of the Colorado Department of Institutions, sought to discover ways in which institutional residential environments could be altered to make readaption more easy. Upper Rounds, State Home and Training School, Wheatridge, Colo., was selected on an experimental basis. Architectural modifications that could be made to improve the physical facilities of Upper Rounds are outlined. The 'operational philosophy' behind the modifications is discussed. Emphasis in the design was placed on creating individual, small scale spaces within the existing wards and day rooms, and upon creating an environment that could be altered by the patients themselves. Plans of the modified floors of the building are included.

1823. BJURSTROM, F., KLÜFT, A. and NILSSON, L. Modern psykiatrisk vårdmiljö i Växjö. Resultatet av en demokratisk planeringsmetod. [**A modern psychiatric nursing environment in Växjö: the result of a democratic way of planning the hospital psychiatric units.**] *Landstingens Tidskrift*, Stockholm, 1977, June, vol. 64, no. 8, pp. 30-36.

Phase 1 of Växjö Central Hospital's 348-bed psychiatric hospital (architects: BJR Arkitektkontor), a 20-bed young people's psychiatric clinic, was opened in 1971. Phase 2, a 17,000 m^2 general psychiatric hospital with 300 beds and a 24-patient day-care department, has now been completed at a cost of s.kr. 34.6 million, a saving of s.kr. 1.7 million on the 1972 estimate. Phase 2 consists of a series of low (one-, two- and three-storey) buildings in a wooded park. The 44-bed general treatment block, House 1, is situated next to the projected general hospital (Phases 3 to 5); House 4 is the only other ward block so far constructed. House 3 is a single-storey physiotherapy department, and House 2 contains admissions and therapeutic departments. Houses 5 and 6 will be built as part of Phase 3, which also envisages an extension of House 3 (physiotherapy, baths and gym). The article is illustrated with five exterior and four interior photographs, four ground plans, a detailed table of floor areas department by department, and an analysis of planned and actual costs.

1824. BERAN, E. and WEISER, G. Die Ausbildung der psychiatrischen Krankenpflegepersonen als Basis einer wirksamen Krisenintervention. [**The training of psychiatric nursing staff as a basis for effective action in crises.**] *Mitteilungen der Österreichischen Sanitätsverwaltung*, Vienna, 1977, May, vol. 78, no. 5, pp. 109-111.

The school of psychiatric nursing at the Wagner-Jauregg Hospital, Linz, Upper Austria, has restructured its training courses to meet the needs of modern psychiatric care and treatment. Great care is taken to select new entrants with the right personality. Appropriate theoretical and practical instruction covers psychiatric medicine and its fringe areas. Special emphasis is laid on team work with doctors, social workers and others. Nurses are trained for work among out-patients and in-patients as well as in the community: they should not only recognize a developing crisis in its early stages (and get medical help) but should be able to play a part in preventing such crises. All

qualified psychiatric nurses are normally expected to attend an annual refresher course.

1825. WINGER, M. Sykehusets funksjoner: med särlig henblikk på det psykiatriske sykehus. **[The function of the hospital, with special reference to the psychiatric hospital.]** *Sykehuset*, Oslo, 1977, vol. 40, no. 4, pp. 191-204.

The most important forms of non-somatic hospitals are adult and paediatric psychiatric institutions, homes for the retarded, centres for alcoholics and drug addicts, epileptics' homes, and special institutions for psychotics and spastics. No allowance is made for e.g. a neurotic or retarded epileptic drunkard! The psychiatric treatment system is in theory built up of the following elements: (i) out-patient clinics; (ii) round-the-clock emergency services; (iii) day- and night-hospitals; (iv) hospital wards; (v) protected workshops and homes; (vi) consultation and information services; and (vii) training and research centres. In practice the co-operation there ought to be between institutions in a given area is often unsatisfactory. All regions possess both psychiatric clinics and psychiatric hospitals, but there is a tendency towards the establishment of unified institutions for the care of all psychiatric cases in the region (as in North Trondhjem, Sogn & Fjordane, and Akershus counties). Blakstad Hospital has two closed wards—an acute admissions ward and one for senile dementia cases—accommodating 20 per cent of all patients in the hospital. Other wards comprise: one for neurotic conditions; one for short-term (psychosis) cases; a long-term rehabilitation ward; a pavilion ward; and three or four long-stay wards, all practising environmental therapy. Internal control is by means of a series of staff/patient committees. There are five out-patient after-care offices in the county, advising some 500 cases a year and taking a considerable load of the hospital. Without more finance there will be a widening gap between ideals and reality. There are five references (one English).

1826. HARTELIUS, H. En geropsykiatrisk vertikal—hur fungerar den? **[How does a vertically organized plan of psychiatric care for the elderly work?]** *Landstingens Tidskrift*, Stockholm, 1977, April, no. 5, pp. 29-34.

A vertically organized psycho-geriatric care plan comprises: (i) out-patient services; (ii) semi-open (day care etc.) facilities; (iii) admission wards (duration of care up to several days); and (iv) acute (short-term) care. After treatment a patient should attempt to adapt to the home environment again. Should long-term care nevertheless prove necessary, open facilities include 'hotel-type' accommodation, old people's homes, nursing homes, county mental homes, and long-stay psychogeriatric institutions. The principle throughout is to apply the lowest effective level of care, positive efforts being made to prevent fall-out in the direction of long-term commital. Two 32-bed acute psychiatric wards were opened at Kristianstad Central Hospital in October 1975, one of which largely cares for psychogeriatric patients while the other caters for a certain proportion of younger patients with various diagnoses, mainly neuroses. The majority of the patients are referred from acute admissions, only eight per cent coming from the waiting lists. The article is illustrated with six diagrams detailing the distribution of cases in the county by age and diagnosis, and an aerial photograph of the hospital. There are six references, one of which is in English.

1827. WORDEN, J. L'aide aux détenus hospitalisés: une approche constructive avec des individus en conflict avec la sociéte. **[Help given to patients detained in hospital: a constructive approach with individuals in conflict with society.]** *Infirmière Canadienne*, Ottawa, 1977, July, vol. 19, no. 7, pp. 32-35.

The author describes her experience as a nurse in the detention unit for 22 young offenders in the Clarke Institute of Psychiatry in Toronto. The patients are usually referred to the unit by the courts before sentencing or commital to prison, and they may stay there for periods of 30-60 days for assessment and treatment. The majority of the inmates suffer from defects of personality or character; they are impulsive and irresponsible, and many have been in prison before. Although their stay is brief some respond to group therapy or individual treatment. A typical case is described.

1828. RAPHAEL, W. **Psychiatric hospitals viewed by their patients.** 2nd edition. London, King Edward's Hospital Fund for London, 1977, 50pp. £3.75

The aim of this study was to devise a method by which psychiatric hospitals could themselves discover the views of their patients. A simple, written questionnaire answered anonymously revealed the attitudes of patients. Three methods were tried out in wards similar to each other in each of three hospitals. The questionnaire was also tried out by six other large psychiatric hospitals and the results analysed. Aspects considered included: general views; nursing care; life in hospital; likes and dislikes. The method described is a useful way of monitoring patients views, and copies of the questionnaire, instructions and a checklist for staff are reproduced.

1829. PALMER, H. Sykehuspasienters innflytelse på beslutningsprosesser. **[The influence of the patient on decision-making processes.]** *Sykehuset*, Oslo, 1977, vol. 40, no. 4, pp. 204-209.

In practical terms, patients in general hospitals have no opportunity of influencing hospital conditions: menus, meal-times, course(s) of treatment or whether they are put in a single room or a general ward. A patients' representative could appropriately be elected to the hospital planning committee, but where does one find a patient with sufficient experience and the ability to make a balanced assessment of conditions. Conditions are more liberal in mental hospitals, where anything up to 65 per cent of patients are voluntary. Patients committed compulsorily may not be detained longer than three weeks without their consent. Patients' wishes not to be submitted to certain examinatory procedures are respected. In a typical Eastern Norwegian mental hospital there is a patients' council consisting of a representative from each of the 11 wards, plus a Social Curator appointed by the Board. The council meets once a week to decide on internal questions such as hygiene, physical training, furniture, buildings, etc. Recommendations are always discussed and replied to by the hospital administration. There are also a monthly staff/patients meeting: periodical 'consumer' committee meetings (entertainments committee, welfare committee, etc.); and occasional hospital co-operative committee meetings. The important point is that problems are solved in a spirit of co-operation instead of in an atmosphere of confrontation.

1830. BRITISH ASSOCIATION OF SOCIAL WORKERS. **Mental health crisis services: a new philosophy; report of the evidence of the British Association of Social Workers on the Consultative document 'Review of the Mental Health Act 1959' and the White Paper 'Better services for the mentally ill' (Cmnd 6233).** Birmingham, BASW 1977, [ii] 42pp. £0.90

This gives the comments of the British Association of Social Workers on two recent Government papers on mental health services. The papers are analysed section by section and a summary of major recommendations is given in a final part of the book. The Association disputes the assumptions of the government papers that present care arrangements which are primarily hospital based are suitable and effective, and argues that there is a lack of committment to direct resources to carry out the aims of the White Paper on 'Better services for the mentally ill'.

1831. MELLOR, P. **Psychiatric care in Japan.** *Nursing Times*, London, 1977, July 28, vol. 73, no. 30, pp. 1170-1172.

The author discusses visits to Matsuzawa (psychiatric) Hospital, on the outskirts of Tokyo, and the psychiatric rehabilitation centre in the neighbouring city of Kowasaki. Psychogeriatrics appears to be a relatively new problem. Nursing establishments are lower than in Britain. The three-year nurse training programme includes only 16 hours of instruction on mental health and 30 hours on psychiatric diseases and nursing, although psychology and sociology are included as general subjects. Practical training includes only two or three weeks in a psychiatric ward. Attempts are being made to remedy this and the Japanese Nursing Association has a four-week post-basic course in psychiatric nursing. The proportion of male nurses is low (14 per cent at Matsuzawa). The rehabilitation centre has facilities for in-patient, day-care and hostel provision. The centre is spacious and well-equipped and is compared favourably with Matsuzawa Hospital.

AUTHOR INDEX

Åhs, U. 1719
Åker, J. 1720
American Hospital Association 1705
Anna, O. 1758
Ashman, B. 1788
Bachner, E. 1784
Bagnall, W. E. 1803
Bailey, J. T. 1709
Baneke, J. C. H. 1748
Barfod, J. 1698
Barker, C. 1819
Barthold, D. 1787
Bennett, A. E. 1682
Beran, E. 1824
Bergh, G. 1694
Bergmann, T. 1765
Berkman, B. 1768
Berman, R. A. 1798
Betz, F. 1792
Billing, A. 1693
Bjurstrom, F. 1823
Boergadine, L. C. 1741
Börner, H. 1759
Bower, F. L. 1773
Braüner, E. 1725
Breindahl, M. 1807
Brewis, E. L. 1757
British Association of Social Workers 1830
Burfeind, R. 1728
Burrell, L. O. 1796
Burrell, Z. L. 1796
Butterfield, S. 1707
Cancellieri, E. 1736
Carter, P. H. 1793
Casey, T. 1747
Castellani, F. 1683
Chalmers, H. 1712
Chittenden, T. S. 1706
Claus, K. E. 1709
Cleary, J. 1802
Coventry, M. 1710
Crow, J. 1764
Daniels, C. E. 1779
Dankmyer, T. 1733
Devlin, H. B. 1724
Dodson, J. R. 1701
Dwyer, M. J. 1702
Eggeling, F. 1723
Ellenor, G. L. 1786
Engelbrecht, G. 1686
Epperson, M. 1766
Feldstein, M. 1735
Ford, D. R. 1783
Fraser, M. D. E. 1795
Frew, I. D. O. 1788
Freymann, H. 1689
Fries, B. E. 1810
Friesen, Q. J. 1708
Frisk, P. A. 1786
Fry, J. 1770
Fuller, T. K. 1815
Gaines, M. 1775
Garcia, D. 1775
Gilbertson, D. W. 1707
Gill, I. 1707
Gillard, R. E. 1820
Ginsberg, A. S. 1870
Glueck, W. F. 1715
Glünder, H. 1692
Gooch, L. A. 1809
Grimsgaard, Ø. H. 1687
Groves, J. 1733
Guldager, E. 1814
Gundersen, G. 1695, 1696
Gurfield, R. M. 1800
Gutkin, C. E. 1810
Halbach 1697
Hampton, J. R. 1797
Hartelius, H. 1826
Hartung, C. 1758
Heek, B. van 1749
Henning, W. K. 1738
Heuer, M. 1722
Heyer, H. 1760
Hill, J. D. 1797
Hixson, R. L. 1742
Holdstock, G. 1797
Housley, C. 1740
Housley, C. E. 1745
James, D. K. 1812
Jensen, A. A. 1753
Jensen, V. E. 1791
Jones, I. H. 1713
Jordan, P. 1716
Kahnt, R. 1755
Kershaw, P. 1750
Klüft, A. 1823
Knobden, J. E. 1785
Knowland, R. 1690
Koncelik, J. A. 1700
Krumrey, N. A. 1737
Kuhlang, H. 1684
Lau-Nielsen, E. 1763
Lawson, J. S. 1806
Lehman, N. W. 1708
Leopizzi, F. 1714
Lindstrom, R. B. 1704
Lingjerde, P. 1718
Lloyd, H. A. 1795
Lohfert, P. 1717
Lowe, W. 1775
Luxton, D. E. A. 1809
McDaniel, B. 1769
Macdonald, A. 1782
McDonnell, D. 1801
McInnes, B. 1754
Madden, M. 1782
Mandal, A. C. 1695
Mankin, D. C. 1715
Marcussen, K. 1734
Matthews, D. A. 1729
Mellor, P. 1831
Metcalfe, D. H. H. 1731
Miller, M. 1767
Mistro, D. del 1808
Moloney, T. W. 1798
Moore, W. R. 1721
Moran, A. D. 1721
Morris, L. N. 1821
Nedergaard, M. 1777
Nielsen, J. 1818
Nielsen, J. A. 1818
Nilsson, L. 1823
Nygren, C. 1787
Ohlow 1697
Orleans, P. 1822
O'Rourke, T. W. 1767
Palmer, H. 1829
Pang, F. J. 1784
Patrick, A. 1751
Pedersen, K. 1756
Perälä-Suominen, A. 1778
Pfouts, J. H. 1769
Phillips, M. 1703
Pilot, L. R. 1744
Préfecture de la Région d'Île de France. Observatoire Régional de Santé 1688
Raphael, W. 1828
Rehr, H. 1768
Richmond, G. A. 1813
Rivers, N. P. 1783
Robertson, H. 1757
Roome, T. W. 1788
Rosson, B. 1816
Rubin, I. 1774
Rupp, H. 1761
Rutter, D. A. 1789
Salling, A.-L. 1804, 1805
Samuel, R. 1817
Sargalski, P. J. 1770
Scarr, K. 1806
Scheid, W.-M. 1772
Schwartz, M. 1759
Sigell, L. T. 1781
Skousen, T. 1727
Smith, A. M. 1811
Sommerfeldt-Colberg, A. 1687
Stafford, D. 1746
Steele, B. W. 1790
Sullivan, M. Z. 1808
Tabaka, A. V. 1739
Tangrea, J. A. 1779
Taylor, A. 1735
Thies, J. B. 1730
Thorup, H. 1814
Trnavsky, G. 1794
Valdez, N. 1776

Valli, G. 1683
Wattenberg, S. H. 1767
Weatherill, J. 1691
Weiser, G. 1824
Wheeler, D. L. 1743
Willemain, T. R. 1799
Winger, M. 1825
Wood, G. C. 1783
Wood, J. 1771
Worden, J. 1827
Young, V. M. 1752

Addresses of publications referred to in this issue

JOURNALS—(*The price of a single issue is given where known*)

Allgemeinmedizin international—General Practice, Westenhellweg 9 (Krügerhaus), Postfach 227, 4600 Dortmund 1, West Germany. DM3
American Journal of Clinical Pathology, East Washington Sq., Philadelphia, Pa. 19105, U.S.A. $4.00
American Journal of Hospital Pharmacy, 4630 Montgomery Ave., Washington, D.C. 20014, U.S.A. $3.50
Australian Hospital, 46-49 Porter St., Prahran, Victoria, 3181, Australia.
British Journal of Mental Subnormality, Monyhull Hospital, Birmingham B30 3QB, England.
British Journal of Psychiatry, Headley Bros. Ltd., Ashford, Kent TN24 8HH, England. £4.50
British Medical Journal, Tavistock Sq., London WC1H 9JR.
Computers and Biomedical Research, 111 Fifth Ave., New York, N.Y. 10003, U.S.A. *and* 15 Cavendish Sq., London W1M 0HT.
Dimensions in Health Service, 25 Imperial St., Toronto, Ont. M5P 1C1, Canada.
Drug Information Journal, Medical Information Services, Sandoz Pharmaceuticals, East Hanover, N.J. 07936, U.S.A.
Electromedica, Henkestrasse 127, 8520 Erlangen, Western Germany.
Fire, Unisaf House, 32-36, Dudley Rd., Tunbridge Wells, Kent, England.
Health and Social Service Journal, 3 Dyers Buildings, Holborn, London EC1N 2NR. £0.25
Hospital Administration in Canada, 1450 Don Mills Rd., Don Mills, Ont. M3B 2X7, Canada. $1.50
Hospital & Community Psychiatry, 1700 18th St. N.W., Washington D.C. 20009, U.S.A. $2.00
Hospital Development, 93-99, Goswell Road, London EC1V 7QA.
Hospital and Health Services Administration, American College of Hospital Administrators, 840 North Lake Shore Drive, Chicago, Ill., 60611, U.S.A. $1.50
Hospital Pharmacy, J. B. Lippincott, East Washington Sq., Philadelphia, Pa. 19105, U.S.A. $2.00
Hospital Progress, 1438 South Grand Blvd., St. Louis, Mo. 63104, U.S.A. $2.00
Hospital Topics, 734 Siesta Key Circle, Sarasota. Fla. 33581, U.S.A. $5.00
Hospitals, 840 North Lake Shore Drive, Chicago, Ill. 60611, U.S.A. $1.50
Infirmière Canadienne, 50 The Driveway, Ottawa, Ont. K2P 1E2, Canada. $1.00
Informations Sociales, 47 Chausée d'Antin, 75436 Paris, France. 10frs
International Journal of Social Psychiatry, 18 Park Ave., London NW11 7SJ.
International Nursing Review, 33 ave. de la Gare, CH-1001 Lausanne, Switzerland.
Journal of the American College of Emergency Physicians, 241 E. Saginaw, East Lansing, Mich. 48823, U.S.A. $2.50
Journal of the American Pharmaceutical Association, 2215 Constitution Avenue N.W., Washington, D.C. 20037, U.S.A.
Journal of Clinical Pathology, British Medical Association, Tavistock Sq., London WC1H 9JR.
Journal of the Royal College of General Practitioners, 33-34, Alfred Place, London SW7 1PU.
Krankenhaus Umschau. Postfach 1149, Oskar-von-Miller-Strasse 5, 8650 Kulmbach (Bayern), Western Germany.
Landstingens Tidskrift, Gävlegatan 16, Box 6606, 113 84 Stockholm, Sweden. 5.25kr
Mitteilungen der Österreichischen Sanitätsverwaltung, Paracelsusgasse 6, 1030 Wien III, Austria. S24
New Universities Quarterly, Basil Blackwell & Mott, 108 Cowley Road, Oxford OX2 4HB, England. £2.25
Norsk Sykenhustidende, Pilestredet 1, Oslo, Norway.
Nursing Mirror, Surrey House, 1 Throwley Way, Sutton, Surrey SM1 4QQ, England. £0.18
Nursing Times, Macmillan Journals, Little Essex St., London WC2R 3LF. £0.18
Öffentliche Gesundheitswesen (Das), Herdweg 63, 7 Stuttgart 1, Western Germany. DM11.00
Ospedali d'Italia, F.I.A.R.O., Via dei Prefetti n. 46, CAP 00186 Roma, Italy. Ll.800

Österreichische Krankenhaus-Zeitung, Klopstockgasse 34, 1170 Wien, Austria. S35
Radiography, 14 Upper Wimpole St., London W1M 8BN.
Revue Hospitalière de France, 83-87 avenue d'Italie, 75013 Paris, France. 20F
Social Work, 49 Sheridan Avenue, Albany, N.Y. 12210, U.S.A. $4.00
Social Work in Health Care, The Haworth Press, 174 Fifth Avenue, New York, N.Y. 10010, U.S.A.
Southern Hospitals, Box 88, Greenville, S.C. 29602, U.S.A. $1.00
Sygeplejersken, Vimmelskaftet 38, Postbox 1084, 1008 København K, Denmark.
Sykehuset, Askergt. 2, Oslo 4, Norway.
Tidsskrift for danske Sygehuse, Amtssygehuset, 2600 Glostrup, Denmark.
Update, 33-34 Albert Place, London WC1E 7DP. £1.20
Voeding- en Huishoudgids, Tesselschadestraat 18-22, Amsterdam, Netherlands.

PUBLISHERS

American Hospital Association, 840 North Lake Shore Drive, Chicago, Ill. 60611, U.S.A.
British Association of Social Workers, 16 Kent St., Birmingham B5 6RD, England.
College of Librarianship Wales, Aberystwyth, Dyfed, Wales.
Dalhousie University School of Library Service, Dalhousie University, Halifax, Nova Scotia, Canada.
Dowden Hutchinson & Ross, Inc., Box 129, 10 North Seventh St., Stroudsburg, Pa. 18360, U.S.A.
East Roding Community Health Council, Room 11, 17/23 Clements Rd., Ilford, Essex, England.
Harvard Institute of Economic Research, Cambridge, Mass. 02138, U.S.A.
King Edward's Hospital Fund for London, 14 Palace Court, London WC2 4HT.
King's Fund Centre, 126 Albert Street, London, NW1 7NF.
Mosby, 3207 Washington Blvd., St. Louis, Mo. 63103, U.S.A.

Printed in England for Her Majesty's Stationery Office by Holmes & Sons (Printers) Ltd. Andover, Hampshire.
Dd. 497324 K11 12/77 9933

HER MAJESTY'S STATIONERY OFFICE

Government Bookshops

49 High Holborn, London WC1V 6HB
13a Castle Street, Edinburgh EH2 3AR
41 The Hayes, Cardiff CF1 1JW
Brazennose Street, Manchester M60 8AS
Southey House, Wine Street, Bristol BS1 2BQ
258 Broad Street, Birmingham B1 2HE
80 Chichester Street, Belfast BT1 4JY

Government Publications are also available through booksellers

ISBN 0 11 722622 X
ISSN 0018-5507